Suburban Residences.

THE present is eminently a time of improvement. Go where we will—in the suburbs of all our cities, in our country villages, and far into the farming districts—we find the people busy constructing and re-modeling their dwellings, laying out gardens, and planting trees. At no previous time, in the history of this country, has such a spirit prevailed. The rage for money-making seems at length to have so far abated as to allow men to think of their homes, and to go about making them somewhat comfortable, and even beautiful. This is something to rejoice at. Were it not so, we should ill deserve the overflowing measure of prosperity which Providence has vouchsafed us. Certainly, no people in the world have stronger inducements to improve and beautify their homes, than Americans. Our present purpose, however, is not to expatiate on this subject, pleasant though it be, but to call attention to a certain defect, which we apprehend is very general among modern suburban residences.

There seems to be a prevailing passion for building on the most public thoroughfares, and for making an undue display of the dwelling and every portion of the ground, to the public. Now this is manifestly a great mistake. *Quiet and seclusion* we have always regarded as among the most important requisites, and, indeed, the greatest charms of a country or suburban residence. What is it that people seek, who retire from the crowded streets of the city, and erect for themselves a dwelling on an acre or two of ground, in the suburbs? Do they go there to erect a costly house, make a beautiful lawn, and plant fine trees, merely to be gazed at and admired by the public? Or do they not rather seek relief from the noise and bustle of the streets, and a quiet, retired place, in which themselves and families may enjoy pure air, and healthful, pleasant recreation? This, we believe, is the aim of by far the greater number; a few, only, are prompted by feelings of vanity, or urged by the power of fashion.

We take it for granted that people erect houses, and make gardens and pleasure-grounds, first and foremost, for their own comfort and gratification. We are surprised, therefore, to see such a passion for building on the most public thoroughfares, and we are inclined to attribute it, in a great measure, to the want of experience. Sites for dwellings and gardens can be had at least one-fourth cheaper, on less frequented and much more desirable localities. The only advantage that can be claimed for the leading avenues, is, that they are nearer to the public conveyances; but this is of trifling importance, especially to those who keep a horse and carriage of their own, and in any case, it would be a poor compensation for the countless annoyances inseparable from such locations. But a few days ago, we passed along one of the popular avenues of our city, where, within a few years, a large number of very tasteful residences have been erected, each having a garden in front, varying from 50 to 100 feet deep. It was a dry time, and the clouds of dust that arose from the street, (thronged with wagons at all hours), had covered every tree, shrub, and plant, with a thick coat, giving them, at the most delightful season of the year, when gardens should be in the

meridian of their beauty, a most dismal and forbidding aspect. What a mistake, we had to exclaim, to come out of town, and spend so much money on suburban residences, in such a place as this, where to step out of doors is to get deafened with noise, and blinded and covered with dust! Why did these men not rather choose some of those quiet streets that lie among the secluded, rural-looking districts? There they might have tasted some of the sweets of country life, but here they cannot.

Something might be done, however, to make these residences on public streets much more comfortable and agreeable than they generally are. The houses might be set further back, and masses of low trees and shrubs might be planted, to exclude the noise and dust, and give them an air of seclusion and quiet. No matter how retired the situation might be, we would plant sufficiently to shelter the interior of the garden, as well as the dwelling, from the wind, and to protect it from intrusion; so that, at all seasons, and at any time of the day, any member of the family might work, or amuse themselves as they saw fit, without being observed. Very few gardens are sufficiently sheltered. In the north, high winds prevail during the early spring months, so that, unless shelter be amply provided for, it is impossible to cultivate spring flowers successfully, or for ladies, or persons in delicate health, to enjoy daily the pleasures and recreations of a garden at that season.

Farmers gardens and dwellings are, as a general thing, sadly deficient in shelter and protection. The house is usually placed, for convenience, close to the highway, and the garden and door-yard inclosed with low, painted board fences. A row of trees, along the street, is all that seems to them necessary; and the consequence is, there is not a spot that can offer pleasant out-door recreation until summer arrives. Why can they not plant, on the exposed sides of their residences, thick belts of forest trees, to break off the winds, and inclose their gardens with high board fences, or what is much more sightly, Arbor Vitæ screens. Ladies, children, or infirm persons, who may desire out-door exercise, would then have some opportunity of enjoying it with safety and comfort. This provision for shelter, on an ample scale, should be one of the earliest cares of every man who goes about the work of improvement in our boisterous climate, where we have winter full half the year. It is a great sacrifice to people who live in the country or in the suburbs of a city, to be shut up in the house six whole months together. Winter walks and resorts need to be provided more than summer, because in summer almost every place is pleasant in the country.

We do not propose to recommend that people should inclose their gardens with high walls, as though they were prisons, or to surround them with thickets of trees to such an extent as would give them an air of exclusiveness, obstruct their views beyond their own boundaries, or impede too much the circulation of air. These extremes are as much to be guarded against as that of too great exposure. There is a medium which every person of good sense will discover, if they but give the subject due reflection.

A very sensible English writer,* a professional landscape gardener of much experience, in speaking of laying out the grounds of a villa residence, says of "seclusion":

* *Parks and Pleasure Grounds*—by C. H. J. Smith; an American edition, of which has been edited by L. F. Allen, Esq.

"This is a quality more or less desirable in all small residences; and in the vicinity of large cities, it may be regarded as indispensable. Of course it does not consist in the exclusion of light and air; neither does it suppose the shutting-out of fine views, whether at hand or at a distance. It is rather the protection of the family from that exposure to public gaze which would prevent them from using any part of their grounds as freely and comfortably as they would their drawing-room. A certain amount of privacy, at least, is essential to that rural feeling which is a principal charm in retirement from the bustle of city life. Some individuals, indeed, seem to have a particular fancy for displaying their flower-beds and lawns to the eyes of the public; a taste, we humbly think, more suited to hotel establishments, than to the abodes of private families. We would have the greater portion of the villa grounds to be possessed of the characters of complete seclusion. At the same time, the error arising from the excess of this quality—the dull, gloomy insipidity caused by over-planting and an over-affectation of privacy—is to be carefully guarded against. On level or gently-sloping surfaces, the proper amount of seclusion may generally be obtained by building the boundary walls from eight to ten feet high. On surfaces with a considerable declivity, such walls will be found insufficient; and as no considerable addition can be made to their height, nor indeed, if added, would prove effectual, the object aimed at must be attained by planting trees and shrubs, which will have to grow for several years, before they afford the desired shelter. As the size of villa residences increases, the difficulties in regard to privacy diminish, as there is room for enlarged masses of trees and shrubs, and the whole place naturally assumes the character of a common country residence."

Another English writer,* who is also a thoroughly practical man of great experience, says:

"Few characteristics of a garden contribute more to render it agreeable than *snugness* and *seclusion*. They serve to make it appear peculiarly one's own, converting it into a kind of *sanctum*. A place that has neither of these qualities, might almost as well be public property. Those who love their garden, often want to walk, work, ruminate, read, romp, or examine the various changes and developments of Nature, in it; and to do so unobserved. All that attaches us to a garden, and renders it a delightful and cherished object, seems dashed and marred, if it has no privacy. It is a luxury to walk, sit, or recline at ease, on a summer's day, and drink in the sights, and sounds, and perfumes, peculiar to a garden, without fear of interruption; or of dress, or attitude, or occupation being observed and criticised.

"Something more, however, than mere privacy is involved in the idea of snugness. It includes shelter, warmth, shade; agreeable seats for rest, arbors for a rural meal, and velvety slopes of turf, overshadowed or variously chequered by foliage, to recline upon. A room that may fitly be called snug, is small in its dimensions, and rather amply furnished, with its window not open at any point to the public gaze. A garden, likewise, to deserve the same epithet, should have its principal or subordinate parts of rather contracted limits, be furnished somewhat liberally with tall-growing plants and trees, which will produce some degree of shade, and present an air of comparative isolation.

"Where there is sufficient extent, it is probably better to have one or more small nooks, or partially detached gardens of a particular kind, to realise something of both snugness and seclusion, and give the leading and broader portions of the garden a more airy and open

* *How to lay out a small Garden*—by EDWARD KEMP.

character. Still, in any case, unless it be purely for show, a certain amount of privacy ought, assuredly, to be sought after. And the more thoroughly it is gained, the more pleasurable to most persons, and the more accordant with good taste, will be the entire production."

This principle is applicable in all countries, because the purposes of a garden are everywhere the same. We remember having seen a street garden, in the city of Baltimore, which struck us, at the time, as being admirably arranged, to adapt it to the situation and circumstances. In order to break the view from the street to the house, the ground was thrown up into irregular and natural-looking mounds, and these were planted with trees. The entrance walk was carried through the elevations, and gave a fine view of the dwelling from the street, without causing any objectionable degree of exposure. The same amount of seclusion could not have been obtained without either very high walls, or very thick and formal belts of trees and shrubs. Undulation of surface might, in very many cases, aid in relieving the lawns of cottage residences of that monotony and nakedness which a perfectly level, closely-mown surface presents.

There is another point in the arrangement of suburban gardens, that we think seldom receives proper attention, and that is, the concealment of the fences that form the boundaries, and such other neighboring objects, of a disagreeable or unsightly character, as may obtrude themselves on the view, from either the house or garden. It is impossible to select a situation, in any neighborhood, wholly exempt from objectional features; but, in most cases, they may be excluded from sight, by judicious formation of the ground, and distribution of trees. We know a gentleman who is unfortunate enough to have for his next neighbor a low, filthy fellow, whose premises are an almost insufferable nuisance. He would gladly purchase his ground, and pay him twice as much as it is worth; but he will not sell. Now, instead of having merely a low, open board fence, between him and such a neighbor, he should have dense screens of foliage, to shut out completely such a disagreeable boundary. Rapid-growing trees, such as Silver Maples, Pawlonias, European Larch, and Norway Spruce, will make an effective obstruction, in three or four years. If the grounds be too small to admit trees of such large size, then live hedges, such as Thorn, Osage Orange, Buckthorn; or evergreens, such as Arbor Vitæ, Hemlock, Red Cedar, or Spruce, all of which may be allowed to grow up (for a screen), without shearing, except on the sides.

THE DIELYTRA SPECTABILIS.

This charming plant proves to be such an acquisition, both to the garden and greenhouse, that we have thought it fully entitled to a place among our colored plates, and therefore present it as our frontispiece for the present month. We must say, however, to those who have not seen a good specimen in bloom, that the meagre raceme which we have space to represent, conveys but a very imperfect idea of its rare grace and beauty. To see a plant measuring three or four feet in diameter, and bearing

twenty or thirty flower stalks, each with numerous gracefully drooping racemes of the most unique and brilliant rosy flowers, is to see the *Dielytra* as it should be. We beg to assure our readers that whatever has been said in praise of this plant, has not been exaggerated — that it is no novelty lauded to-day to win it favor with the public, and in six months hence to be cast aside as a "humbug."

It is now some ten years or upwards since it was sent from China to England by Mr. FORTUNE, the collector of the London Horticultural Society, and since that time it has bloomed among the finest collections of plants in Europe, and in all cases it has elicited unqualified praise. For many years its culture was confined to greenhouses and conservatories, as most rare plants are; but latterly, as it became more multiplied, it has been trusted to the garden; and there, in a rich soil, with ample room to spread its roots and gather food, it has developed its native luxuriance and beauty. The finest specimen plant we have seen in this country in the open ground, was in the garden of ABIJAH REED, Esq., of Hulberton, Orleans Co., N. Y., a year ago. That gentleman loses no opportunity to enrich his little garden with whatever is new and excellent, and this he considers one of the finest hardy herbaceous border plants he has seen. What adds immensely to its value is its entire adaptation to either house or garden culture, and that it requires only the simplest treatment, out doors or in, to ensure perfect success. It is a plant for the million. Our correspondent, Mr. SANDERS, has given an account of his success in forcing it, and we have been able from our own experience to endorse all he has said. In the garden it is as easily grown as a common Pæony, requiring no more than a good deep and rich soil — the richer the better. It is also one of the easiest of plants to multiply — just as easy as a Dahlia. We propagate it exactly in the same way, viz., by cuttings of the young shoots, taken off in spring, and placed on a gentle bottom heat. Plants struck thus, and bedded out as are Verbenas, Petunias, &c., will bloom finely a long time toward the latter part of the season; and by these succeeding the plants that are allowed to remain in the ground, it may be had in blossom

DIELYTRA SPECTABILIS.

nearly all summer. It can also be very easily increased by taking up the plants and dividing the roots in spring, before it commences to grow. We feel confident that it will make an excellent window or parlor plant. A large plant put into a pot or box in October, and kept dry the early part of winter in a cool room, where the temperature will be about 40°, or just above freezing, and then brought into a temperate heat about the middle of February or 1st of March, will in a short time be a beautiful object. The annexed wood-cut is given to illustrate in some degree its habit of growth. We remember seeing in an English journal an account of a plant that measured upwards of thirty feet in circumference and five feet high, with upwards of two hundred perfect spikes of blossoms at once. The shoots are succulent, almost transparent, and attain the height of two to three feet. The leaves are somewhat like those of the Pæony in form, and the flowers are produced on the young shoots in bending racemes, each having from ten to twenty flowers. These are a brilliant rose color, and in form resemble somewhat a small fancy work bag. The corolla consists of four petals; the two large ones, forming the most showy part of the flower, are compressed and turned backwards at the point, and the two small ones, which project below the others, adhere to each other, and cover the stamens. These latter are whitish. On close examination, the flowers are no less curious and wonderful than they are beautiful.

Mr. FORTUNE described it as one of the most popular plants in China, cultivated with a passionate fondness by the Chinese mandarins among their rarest and most beautiful plants, and that figures of it in bloom embellish some of their finest china-ware. The Chinese name is "*Hong-pak-Montan-wha*," or flower of the Montan red and white. They give it this name on account of the foliage resembling that of the Montan Pæony, and the flowers being red and white.

It belongs to the natural order Fumariacæ — Fumeworts of LINDLEY's "*Vegetable Kingdom*" — and, as a French writer truly says, is the queen of them all. It has been variously called *Dicentra*, *Dielytra*, and *Diclytra*. In England and in this country it is now almost universally written *Dielytra*. The French have it *Dicentra*, on the ground that this is the oldest name and the most significant, as it is composed of two Greek words having reference to the peculiar form of the two large petals. The Germans usually write it *Diclytra;* and Prof. BERKLEY, who is good English authority, seems to consider this correct. In a note which appeared in the *Gardener's Chronicle* in July, 1853, he said the vexed question as to the comparative claims of these names is solved beyond a doubt on reference to the original paper in which the genus was proposed. In "*Römer's Archiv. für die Botanik*," (ROMER's Botanical Records), 1797, BORCKHAUSEN, in a paper on the genus *Fumaria*, proposes *Diclytra* for *Fumaria cucullaria* of LINNÆUS, resting its character on the peculiar structure of the corolla and the six distinct stamens. If this be the fact, then *Diclytra* should have the preference, according to the laws of scientific nomenclature.

THE NEWER DECIDUOUS TREES AND SHRUBS.

BY HENRY W. SARGENT, WODENETHE, FISHKILL LANDING, N. Y.

In addition to the more common and usually planted deciduous trees and shrubs, there has been a great and very charming accession to our ornamental plantations, within the past five or six years. The searches of Dr. Hooker, Messrs. Fortune, Douglas, and the other collectors of the Royal Botanical Garden, at Kew, and of the Duke of Devonshire, have been attended with the greatest success; in addition to which, our own active intercourse with California has very materially increased the variety, which is now becoming gradually acclimatized and adopted into the gardens and pleasure-grounds in this country.

Among the many new and beautiful plants which seem to have proved perfectly hardy, even as far north as Albany, and perhaps further, the *Forsythia viridissima*, and the *Weigela rosea*, are among the most attractive; the former, one of our earliest and most profuse blooming spring shrubs; and the latter, covered with its roseate flowers from the middle to the last of May, partaking somewhat, (though much more beautiful,) of the character of the Fly Honeysuckle.

Among the newer Magnolias, the *M. fuscata*, *cordata*, *Frazeri*, *longifolia*, *striata*, and *gracilis*, all prove quite as hardy as the *conspicua*, *Soulangeana*, *tripetala*, *acuminata*, *macrophylla*, *glauca*, &c., all of which, say twelve or more, are quite hardy here, and should be in all collections.

To this portion of plantations, which all flower about the same time, should be added the *Pawlonia imperialis;* the different varieties of Hawthorn — the single white, red, and pink, [these three grafted on the same stock, have a pretty effect,] the double white, the double red, and the variegated leaf; and the *Andromedas*, [these are evergreens.] The English Azaleas, than which nothing can be more brilliant and gorgeous, and the newer Belgian varieties; the true *Deutzia gracilis* and *Deutzia scabra;* and the *Ribes sanguinea* (double), the *Ribes Gordoni*, and the *Ribes speciosa*, are all beautiful and rare. The double-flowering Sloe, the double-flowering Plum, Peach, Cherry, and Apple, and the *Spiræa prunifolia*, are all beautiful. To these add the double pink, white and yellow Horse-Chestnut, and the dwarf Horse-Chestnut, all blooming in quick succession.

There is no end to the Spiræa family, and they abound in beauty. The many are well known. *Lindleyana*, *Douglasii*, *Reevesii*, and *prunifolia*, are among the newest.

The Chinese Wistaria, if trained to a pole eight or ten feet high, and kept well cut back for some years, will, in process of time, have all the beauty and appearance of a weeping tree, and what is even more valuable, bloom in succession all summer.

The French and African Tamarisks are pretty and hardy.

Among the variegated trees and shrubs, the variegated Sycamore, Oak, Elm, Beach, Chestnut, Maple, Horse-Chestnut, Syringa, Euonymous, Currant, and Thorn, all do well upon this place, and are striking and interesting varieties. The variegated-leaf Dogwood is very rare and curious.

The cut-leaved family is also very curious. The prettiest of these are the cut-leaf Beech, the cut-leaf Horse-Chestnut, and the cut-leaf Ash. Though the cut-leaf Linden, and cut-leaf Birch, are desirable in a collection. [The cut-leaved Birch is, to our taste, one of the most elegant trees recently introduced.—Ed.]

The purple trees and shrubs are the copper and purple Beech, the purple Filbert, and the purple Berberry. A few of these intermingling with the fanciful, gay foliage of the variegated Sycamore, Syringa, Thorn, &c., have the prettiest effect, if not overdone, or too much, or too glaringly exposed.

The weeping trees are now, generally, so well known, as hardly to require mention. The old and new Weeping Birch; the lanceolate-leaved Weeping Birch; the green and purple Weeping Beech; the old green, the yellow, and the lanceolated Weeping Ash; the Weeping Sophora; the Weeping Horse-Chestnut, Oak, Elm, Poplar, Thorn, Laburnum, Cotoneaster, Peach, Cherry (three varieties), Euonymus; besides half a dozen more of the smaller shrubs, grafted standard high, and allowed to weep down, such as the *Caragana arenaria*, *Euonymus linifolia*, *Caragana frutescens*, *Cytisus lessifolia*, &c.

One of the most desirable and beautiful trees, at this season, is the *Virgilia lutea*—beautiful in its habit and foliage, and exquisite in its bloom.

The purple and oak-leaf Laburnum are worth a place in any shrubbery. The oak-leaf Hydrangea is quite hardy and desirable.

For hedging, the most beautiful are the Hemlock, the English Yew, and the Beech; the most serviceable, the Buckthorn, Washington Thorn, and Osage Orange.

Among the Elms, the *Ulmus glabra pendula*, the Scampston Weeping, and the Camperdown Weeping, are very remarkable.

There are a good many fine foreign Elms, not pendulous in their character, yet well worth planting. Such as the Chichester, the Cornish, the Exmouth, the Huntington, the English Cork, the Dutch Cork, the Scotch and the English Upright—a most valuable tree, from its property of retaining its foliage, green, long after the surrounding trees are stripped.

Among the rarer Maples, are the silver striped leaf; the Norway, (the finest, I think, of all Maples;) the *Acer Tataricum;* the English, with a very dense, round, habit of growth; and the purple Maple, with leaves of a rich dark green externally, and of a chocolate brown underneath.

Besides the Ashes above enumerated, are the Willow-leaved; the Aucuba-leaved, blotched with yellow, like the *Aucuba Japonica;* the Myrtle-leaved; and a new and pretty variety, originated, I believe, with Messrs. Ellwanger and Barry.

The Turkey, the Overcup Oak, and the English Royal, Lucomb, and Fulham, and our different American varieties, are, of course, all desirable, where the size of the place will admit.

I shall end this chapter with one more tree, which to my taste is, among deciduous trees, one of the most graceful and fairy-like of all of the large collection I have here, and that is the new Weeping Larch, grafted twelve feet from the ground, and certainly

most charmingly graceful in its swaying, pendulous habit, as much so as the Weeping Willow.

[At our request Mr. SARGENT has very kindly sent us the above notes on deciduous trees and shrubs of comparatively recent introduction. To gentlemen who are setting about improving their grounds, or extending their plantations, and are anxiously inquiring what they should plant, this list will be of great service. We prefer the opinion of an amateur in these matters, provided he have the requisite taste and experience to base an accurate judgment upon, because professional men recognise such trifling distinctions, and are so prone, even honestly, to magnify any novelty of character, that their descriptions are seldom realized by the mass of cultivators. Two Roses, for instance, that a professional Rose-grower would pronounce as dissimilar as possible, would pass for one and the same thing with nine-tenths of the amateur cultivators. So it is in the peculiarities which characterize different species and varieties of trees and shrubs.—ED.]

A CHAPTER ON PEARS.

BY A. FAHNESTOCK, SYRACUSE.

WHILE the general complaint, during the past summer and fall, was of severe drouth, all around us we were over-supplied with rain, having had a very wet season. The ground on which our specimen trees are located, is rather low and flat, consequently they have had an undue quantity of moisture, during the whole season, on account of which the fruit on the trees were similarly affected; that is, they contained a superabundance of juice, and were not so fine in quality. This we easily detected in the well-known fruits, such as *Bartlett*, *Louise Bonne*, &c.; and the new fruits, as well as nearly all others, partook of the same malady. (1) Therefore our specimens of fruits, although well grown and handsome in appearance, did not come up to their usual excellence; and the quality in 1853, would not compare, generally, with that of the same fruits in 1852. Some allowance, therefore, ought necessarily to be made for those described from their fruiting the past season only.

I will now notice some few misnomers in the trees received from Europe in 1850, and which have been tested for the past three years. They came from the nursery of Mr. ANDRE LEROY:

Beurre d'Anjou has proved to be the *Brown Beurre.*

Beurre d'Anjou Gris is identical with the above.

Doyenne d'Ete has borne nothing but fine *Dutchess de Bervi.*

Belle de Brusselles has proved to be much coarser, and far inferior to that variety, but not identified.

We had twelve trees of each of the above described fruits, each and all proving to be wrong, as stated.

Signoret.—This Pear has fruited twice with us; resembles the *Belle Lucrative,* in

size, shape, color, quality, and season, and without any hesitation we pronounce it, as well as *Seigneur d'Esperin*, the same as *Belle Lucrative.*

Beurre Lucrative is identical with the above.

De la Vault.—This Pear never fruited until this season. We cut the first specimen September 6th, and upon tasting the same we were delighted, proclaiming it equal to the *Bartlett.* Its great similarity caused us to examine the tree minutely; and after tasting another specimen, we came to the unanimous conclusion that it was the *Bartlett*, and nothing else.

Des Nonnes.—This fruit we received from the same source, and came to us labelled *Des Nones.* We found the name in Mr. LEROY'S catalogue, among those of his lowest priced Pears. When he issued his next catalogue it was spelled *Des Nonnes*, and placed in a list of his Pears quoted at double the former price, but still without a description. Mr. LEROY, in his correspondence with us, says, "We have no trees of this kind, at present, in our collection, except one in our school of fruits, which has never, as yet, fruited in our nurseries, and we owe our knowledge of its merits to your notice of it. We pronounce this Pear of the very highest excellence, combining the high flavor of the *Seckel*, with the delicious, melting qualities of the *Belle Lucrative.* Fruit—medium size, regularly turbinate. Skin—smooth, fine, clear, light yellow, covered with numerous small, brown dots. Stalk—from one and a half to two inches long, slender, inserted in a very slight depression. Calyx—small, closed and placed in a small, shallow basin. Flesh—whitish, very juicy, sweet, melting and delicious, with an exquisitely fine rich flavor and perfume. Ripens from the 10th to the last of September. The tree is a luxuriant grower, forming a handsome pyramid on the Quince, and an abundant bearer. The fruit is uniform in both size and appearance.

Beurre Charron.—This is another fruit received from ANDRE LEROY, and like the *Des Nonnes*, came unheralded and unknown. The only notice we have had of it is in Mr. LEROY'S catalogue, where it is entered under the head of "New species obtained at Angers," but without description, while about twenty others, in the same list, are particularly described. This is quite unlike the *Des Nonnes*, in flavor, but nearly or quite equal to it in quality. Fruit—medium in size. Form—roundish-obovate. Skin—yellowish-green. Stalk—three-fourths of an inch long, set on without depression. Calyx—closed, and placed in a deep, and rather broad basin. Flesh—exceedingly melting, juicy, and perfumed, more like the *Belle Lucrative*, in its highest excellence, in these particulars, than any Pear we know. Ripens about the 10th of October. It grows well on the Quince.

Doyenne Defais.—Fruit—above medium. Skin—yellow, with a fine red cheek. Stalk—about one inch, and inserted in a deep cavity. Calyx—open, placed in a deep, narrow basin. Flesh—white, fine-grained, very buttery, melting, rich, high flavored, and delicious. Very desirable indeed. Grows finely on the Quince. Season—middle of October.

Beurre Biemont.—Fruit—medium, obovate, greenish-yellow, with a brown cheek. Stalk—quite obliquely inserted, without depression. Calyx—small, closed, and placed in a shallow cavity. Flesh—buttery, melting, juicy, sweet, with a slight and agree-

able perfume. An excellent fruit, and promises well. Ripens from 13th to last of October. Grows well on the Quince.

DOYENNE DEFAIS. BEURRE CHARRON.

Beurre Superfin.—Fruit—large, fine yellow. Stalk—one inch, inserted without depression. Calyx—spreading, in a rather shallow basin. Flesh—yellowish-white, fine grained, buttery, very melting, extremely juicy, with a rich, subacid, vinous flavor Season—October 12th to 20th. A splendid Pear for those who prefer the high vinous characteristic. We fully sustain the opinion of Col. WILDER, and hesitate not to call it a first-rate Pear.

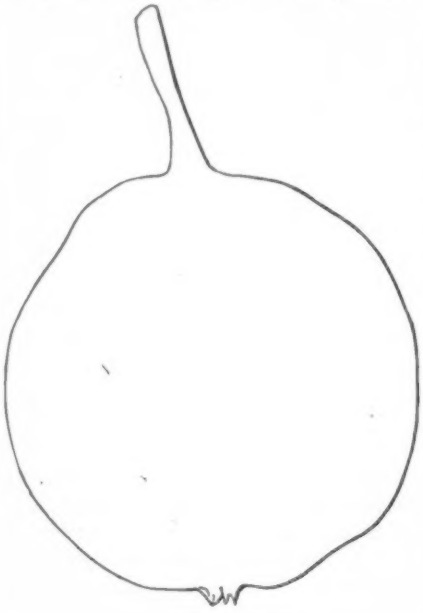
Vizouziere.—Fruit—small to medium, round. Skin—smooth and yellow. Stalk—an inch and a half long, slender, and deeply inserted. Calyx—open, and placed in a shallow basin. Flesh—very melting, juicy, sweet, agreeable, but with little or no perfume. Ripens latter part of September. This has fruited with us this season for the first time, and needs further trial. Grows well on Quince.

Serruriers.—Medium, greenish-yellow. Stalk—inserted in a moderate depression. Calyx—large and spreading, in a deep cavity. Flesh—coarse-grained, very juicy and melting, with a high, vinous flavor, like *Brown Beurre*, and with a slight bergamot perfume; desirable, and possessing, somewhat, the characteristic of the *Beurre Superfin.* It has fruited this season the first time; needs further trial, but promises well. Grows well on the Quince.

Beurre Giffart.—We send you two cuts of *Beurre Giffart*, as they differ much in growth; the one grown in 1852, the other in 1853. They differ, somewhat, from the

cuts in your February number, though would be identified with the outlines of the description there given. Your full impression on frontispiece, as regards form, would be considered the exception with us, as they have grown on our grounds, and the cuts or outlines more of the general form. In addition to your description, we would say, that with us, it is remarkably straggling in its growth.

Belle de Brissac.—Of this fruit we send you two cuts; one taken September 14th, 1852, and the other, September 15th, 1853, to show how they differ in form. We described in 1852 as medium, quite round, light yellow. Stalk—about an inch long, and fleshy at the base. Calyx—small and closed. Flesh—white, tender, melting, sweet, not rich or high flavored, but a good second-rate Pear. A specimen cut a few days after this was much richer, and very finely flavored, and might be termed "very good." Promises well, but needs further trial. You will perceive that this description of form does not exactly suit the cut of 1853. The tree is a fair grower on Quince.



BELLE DE BRISSAC.

Beurre Beauchamp.—Medium, roundish, greenish-yellow. Stalk—an inch and a half long, fleshy at the base. Calyx—open, in a shallow cavity. Flesh—buttery, melting, sweet and agreeable. It promises well. Fruited this season, only. Grows well on the Quince. This, with the five following, were described by Mr. HANCHETT while the writer was west. (2)

Passe Tardive.—Fruit—medium, turbinate. Skin—yellow. Stalk—one inch, in a small cavity. Calyx—open, placed in a shallow basin. Flesh—yellowish-white, buttery and juicy, with a rich, sweet flavor. Grows well on the Quince. (3)

Sucre Noire d'Ete.—Fruit—medium, obovate. Skin—yellowish-green. Stalk—an inch long. Calyx—small, closed, and set in a narrow basin. Flesh—juicy, melting, very sweet, and highly perfumed, with the true *Seckel* aroma. Seems inclined to rot at the core, otherwise this would prove one of the most desirable of its season—20th to last of August. Grows well on the Quince.

Hosenshenk.—We sent you a specimen of this Pear, which you noticed shortly afterwards, but as it had decayed before you could take a drawing, I send you another This Pear is emphatically large, and our friend, Mr. GARBER, who sent us the speci-

mens, apologizes for the *unusual small size*, on account of the overbearing of the tree. We hope to have it in bearing on our own grounds this year, or by next, so that we can test it fully here. At present, we look upon it as the best Pear of its season, all things considered. Ripe middle to last of August. A free grower on Pear stock. (4)

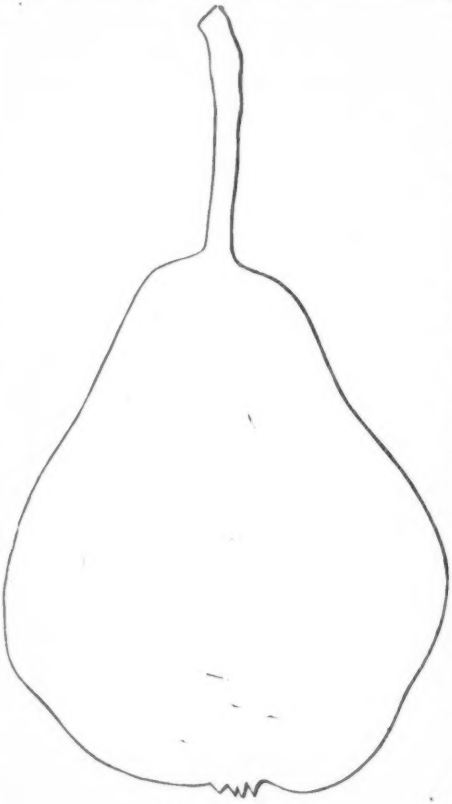
HOSENSHENK. DELICES CHARLES VAN MONS.

Delices Charles Van Mons.—Fruit—large, medium, fine lemon yellow, with a thin coating of russet on one side. Stalk—an inch long, set on without depression. Calyx open, in a small basin. Flesh—melting, vinous, juicy, and refreshing, with a peculiar perfume, like the *Kirtland*, which it much resembles in flavor. Ripens from the 20th to the last of September. Grows finely on Quince.

Chamoisine.—This Pear has fruited with us three seasons. We find it uniformly large, oblong. Skin—smooth, yellow, with a fine red cheek. Stalk—very short, stout, and fleshy. Calyx—in a small cavity. Flesh—firm, moderately juicy, somewhat perfumed, and pleasant, like the *Bergamot*. It is of surpassing beauty, but only of second-rate quality. Season—September. Makes a fine pyramid on the Quince. (5)

Fondante de Malines.—Fruit—large, pyriform. Skin—golden yellow, deepening to orange on one side. Stalk—an inch and a half long, stout, and obliquely inserted.

Calyx—large and spreading, and placed in a very shallow cavity. Flesh—yellowish-white, coarse-grained, buttery, juicy, sweet, rich, and finely flavored, quite like the *Bartlett*; and we feel disposed to call it truly a first-rate Pear. As Col. WILDER states, it will grow in favor, and, no doubt, become one among the selected sorts. Season—with us 20th to last September. Grows well on the Quince.



ST. MICHAEL ARCHANGEL.

Bonne d'Ezee—Is a fine Pear, large, yellow, with a fine blush, melting, sweet, and delicious. It promises well. A beautiful grower, and makes a fine pyramid on the Quince. Season—October.

St. Michael Archangel—Is also a very fine Pear, large, handsome, melting, and high flavored. Like the preceding, is a fine grower on Quince. Our specimens having been stolen the present year, we could not say as much as we would desire of these two Pears. Both promise well. Season—October. I send you the cuts, because we have had so many inquiries concerning them.

Fondante Charneuse.—I send you two cuts, as they appear to differ in shape. This modern Pear is of medium size, irregular, or one-sided. Skin—pale yellow, slightly tinged with blush. Stalk—an inch long; very obliquely inserted without depression.—Calyx—placed in a deep basin. Flesh—melting, sweet, fine-grained, and buttery, with but little perfume. Season—1st to 15th October. It is a good grower on the Quince.

Doyenne Sieulle.—This is also a valuable Pear, of modern origin. Fruit—large medium, roundish-oblong. Skin—yellow, with reddish-brown cheek. Flesh—fine-grained, buttery, melting, rich, sweet, and very finely perfumed. Season—October. Grows finely on the Quince. Very desirable. (6)

Catinka.—We send you two cuts, as they differ materially in shape; one the growth of 1852, the other of 1853. Fruit—large medium. Skin—green. Flesh—juicy

melting, sweet, sprightly, and agreeable. Season—last of September. Grows well on the Quince.

Doyenne d'Alencon.—Fruit—medium, obovate. Skin—greenish-yellow, with a rich brown cheek. Flesh—coarse-grained, melting, buttery, juicy, sweet, and very agreeable. A fine Pear. Season—middle October. Grows finely on the Quince. (7)

De Bavay.—We give you again two cuts of this fruit, differing very materially in form. You will perceive how much they vary from the outlines given by Col. WILDER. Our trees came from Mr. LEROY. Fruit—small to medium, rather pyriform. Skin—yellow, covered with small, brown dots. Stalk—1½ inches long, obliquely inserted. Calyx—open, set in a deep, broad basin. Flesh—juicy, melting, sweet, and slightly perfumed; very good in quality. Season—with us from 8th to 20th October. Grows well as a dwarf.

Colmar d'Aremberg.—Fruit—large, very juicy, flavor something like *Summer Bonchretien*, rather more tart. Grows well on the Quince.

Beurre Millet.—This cut is from a prematurely plucked specimen, and gave every evidence of a first-rate Pear. Good grower on Quince.

Du Mas, or *Duc de Bordeaux.*—Fruit—large, pyriform. Skin—yellowish-green, with a reddish-brown cheek. Stalk—one inch, inserted in a shallow cavity. Flesh—buttery, melting, with an abundant, perfumed, refreshing juice. Calyx—very small, placed in a very deep basin. A handsome and desirable Pear. Forms a beautiful pyramid on the Quince.

Doyenne Robin.—We send you two cuts, as they vary, somewhat, in form, and differ a little from Col. WILDER's. Our discription gives the length of stem nearly, or quite, two inches, and the flesh as not white, but more approaching a yellowish-white. Very good. Grows finely as a dwarf.

Triomph de Jodoigne.—Fruit—very large, obtuse pyriform. Skin—yellowish-green, with a reddish-brown cheek. Stalk—one inch, inserted in an obtuse, uneven cavity, and fleshy at its base. Calyx—small, placed in a deep basin. Flesh—yellowish-white, buttery, melting, with an abundant, slightly perfumed juice, sub-acid and agreeable. Very desirable on account of its splendid size and appearance, and for its *very good* qualities. It is a beautiful grower on the Quince.

[We have thought it unnecessary to give outlines of such varieties as are already well known, or have been recently figured and discribed in this journal.

(1.) This cannot be called a "malady," but merely a defect.

(2.) This is a synonym of an old, well-known variety—*Bergamotte Cadette.*

(3.) This is a long keeping cooking Pear, with us. Our specimens are yet hard as bricks.* Yours cannot be true.

Belle Alliance.—We omit discription, as you say you have two varieties under that name. Better wait until the matter is cleared up.

(4.) There is a variety of opinions in regard to the value of this Pear, among those who know it best.

* This article was intended for publication in the May number, and our notes were written in April.

(5.) Worthless.

(6.) A fine Pear. Keeps well till Christmas, or 1st January.

(7.) Your variety cannot be true, as this is a long keeper, of fine quality. Our specimens are yet beautiful. It keeps till May.—Ed.]

QUINCES IN CENTRAL NEW YORK.

BY C. E. GOODRICH, UTICA, N. Y.

Twelve years ago few people believed that Quinces could be grown in the valley of the Mohawk, although it was known that they were cultivated at Clinton, in the south part of the county. About that time a few trees began to bear fruit, in this city, in gardens having a clay soil, and situated at various elevations above the river,—say from fifteen to seventy feet.

In the spring of 1843, I procured a few trees from Clinton, three or four years old, which I planted in my garden, on the high ground near the Insane Asylum. These I have since increased to some hundreds, by suckers and cuttings, mostly for the purpose of stocks for Pears. Those set for bearing fruit, stand in a light, sandy loam, though a few are in swamp muck, where sand is an ingredient of the soil. A part of those in the sandy loam have a light, sandy sub-soil; but those which have done best have a clay hard-pan sub-soil. These last have suffered least from the effects of winter, and have borne most fruit. They were all set in deep, large holes, filled mostly with good top soil, with which a little lime rubbish was mingled. This last was mostly obtained from the soap factory, and was mixed with leached ashes. Those set upon the hard-pan were upon a moderate slope, falling to the south, but not sufficiently to prevent the holes from becoming a water cup, into which the water actually percolated, in the early spring, when they were dug. Theoretically, I cannot now approve of setting fruit trees in such a position, though practically, it has worked well. The roots, most probably, have always become dry before the weather was warm enough to excite vegetation. If so, the temporary influence of cold water about the roots could not injure them. One of the trees thus situated, whose top you could gather under a five bushel basket, has, again and again, borne three pecks of Quinces, in a single year.

A little manure, widely spread and faithfully dug in the spring, has been found useful. This has usually been coarse, low manure. For the first few years I gave my trees a regular salting in the spring, but have neglected to do so for three or four years. Possibly there is yet an abiding influence of these early applications. I, however, doubt the necessity of its application. During the first two or three years after they began to flower, the petals were all eaten up by a sort of winged ant. I have also lost a few by the borer, as I suppose, although I have not had time to look for him, and have used no precautions against him.

My trees have no protection from the cold west wind, beyond the influence of a distant high fence, and of an occasional Plum tree standing near. On the whole, my

experience justifies the confident hope that, in at least many localities here, the Quince may be rendered fairly profitable.

I may further observe that, although I usually cultivate my trees as single standards, I find they succeed equally well when three or four grow out of the same root, provided, always, the original number is maintained by the careful removal of sprouts every spring. Many gentlemen in our city have been equally successful with myself, so that quite a number of families now raise their own supply of this fruit.

THE PEAR BLIGHT.

BY A. H. ERNST, CINCINNATI, OHIO.

The Pear is now esteemed as one of the indispensable luxuries connected with a suburban or country residence. It is, therefore, not only important that the amateur and the novice should have information on the character and relative value of the fruit, its time of ripening in our climate, that he may select judiciously, but that he should also be somewhat informed on its adaptation to soil, and its cultivation, with the necessary care to protect the tree against the vicissitudes of climate, and the maladies to which it is subject.

The tree is not a native of our country. It is said to be of Europe and Asia, where it lives to great age, and grows to an immense size, with other native trees. In that condition, it is hardly recognizable as the parent of the present luscious and high-flavored fruit, but is small, austere, puckery, and unfit for the palate. It is to the skill of cultivators, that we are indebted for this great change and improvement in its character; and to none so much as to the late Van Mons, of Belgium. Chance or accident have not been idle in the work of adding many excellent varieties to the list; but the improvement of the fruit has (though not always), been at the expense of the hardiness and durability of the tree. This point has been too much overlooked by propagators; its tenderness being seen, scientific cultivators are giving more attention to correct it in their future additions.

The cultivation of the tree is very simple; it readily adapts itself to any soil or location, so that it be not a swamp or marsh. A deep, rich, clayey loam, with a porous subsoil, and a full exposure to light and air, is the best for its full development. The tendency of the tree is to throw down strong tap-roots; it is, therefore, important to know something of the nourishment it will find to feed on there. This tendency is overcome by growing it on the Quince, the natural disposition of which is to spread its roots, and luxuriate on the surface soil; though the tree is dwarfed, and the duration of its life shortened, still it is better for shallow soils, and gardens where not much room can be afforded. The fine sorts, with few exceptions, succeed well and produce abundantly on the Quince. These are usually trained in pyramid form, branching from the ground up, making a very handsome and attractive object in the border.

When grafted or budded on their own stocks, they require more room, and are usually longer coming into bearing.

The cultivation of the tree has, however, its drawbacks. It is not hardy; or, if you do not like the term, it is subject to be cut off and destroyed by death at any time, when seeming in full vigor of health and growth. On the cause, there has been much speculation, without seeming to come to any satisfactory conclusion.

Long experience, observation, and much reflection, have established in my own mind the cause. I do not know that I can make this clear or satisfactory to you, and other minds, but I may open a door to a new, or rather an unexplored field for thought and reflection, both to the practical and the scientific investigator. Perhaps there is no spot in this, or any other country, where a greater opportunity has been afforded for an observance of the diseases to which the Pear tree is subject—especially that form which we understand as *fire blight*—than here.

Scientific gentlemen, with some exceptions, have generally followed each other in attributing it mainly to INSECTS, and some to an *exhaustion*, or *absorption* of those *particles* from the *soil* which are *essential* to the *health* and *life* of the *tree*, and the *perfect development* of its *fruit*, admitting, at the same time, the existence of other extraordinary causes for its disease and death.

Without denying that insects are sometimes injurious to the Pear tree, even to its destruction, I must be permitted to question the general correctness of the theory, and also that of an exhausted soil. To my mind, facts do not warrant such conclusions, as applicable to our region. To make out the latter theory, it should not be left to rest on doubtful speculation, but it should be shown to harmonize with matters of practical fact, as they continually occur. The ingenuous mind never should allow itself to lose sight of these.

Though, unquestionably, the working, or grafting on bad stocks, such as *suckers*, and planting in *bad soil*, will facilitate the destruction of the Pear tree—as the same cause would any other—they are only *local*, and *lay* not at the *root* of the *evil*. To suppose the adventitious existence of some substance in the soil, to remove difficulties out of the way of a favorite theory, is not satisfactory.

It has been advanced that the cracking of the *White Doyenne* is owing to an exhaustion from the soil of those particles necessary to its perfect development; that the tree would resume its former habit of the production of perfect fruit, if these substances were supplied to the roots. Among many reasons for dissenting from this position, let me say, that for eight or ten years, I have hardly had a perfect fruit on trees of this variety, many of which formerly bore fine fruit, until last summer, when, on all of them, it was as fine as I ever saw it any where; and this without any application whatever to their roots. The trees are scattered over my grounds; some in grass, the sod of which has not been disturbed for years. I attributed this remarkable effect to atmospheric influences—with which the composition of the soil had nothing to do. It was, during the growth of the fruit, unusually dry for our climate.

Let us now examine the analysis of the Pear tree, as a correct and reliable basis to overcome the malady to which the tree is subject. LOUDON, and other eminent writers

on the subject, would have us to understand that there is a strong analogy in the life principle of plants and animals. It is, therefore, fairly inferable that, as animals of the same species do not wholly depend on one class of food for life and health, but that, to a certain extent, choice is left to select from, producing the same results, that this is equally applicable to plants. When we, therefore, have the analysis of Prof. EMMONS before us, showing that the ash of the sap-wood of the Pear tree contains more than twenty-seven per cent. of phosphate of lime, twenty-two of potash, and a number of other inorganic elements, though perfectly correct, are we sure that a tree grown in a different soil will not produce different results? I shall show that this is the case in other species of trees, and therefore infer it is so with the Pear. It is very certain that the color of fruits is affected by substances in the soil and taken up by the roots, not essential or detrimental to the health of the tree.

LIEBIG, in speaking of the inorganic constituents of plants, says: "Many of the inorganic constituents vary according to the soil in which the plant grows," &c. Again: "Most plants, perhaps all of them, contain organic acids of very different composition and properties, all of which are in combination with bases, such as potash, soda, lime, or magnesia," &c.; and after proceeding to show that certain acids are always, of necessity, present in plants, he proceeds: "It is equally certain that some alkaline base is also indispensable in order to enter into combination with the acids." And, while he seems to make it clear that the life and health of the plant depends invariably on certain acids, he says: "It will be necessary to bear in mind that any one of the alkaline bases may be substituted for another, the action of all being the same." His object is, if I understand him, to prove that certain acids are in the first place essential to the existence of the plant, and that this always attracts a given quantity of alkaline; that these alkalines are not necessarily the same, but similar in action; that the plant will take them up as they are found in the soil. To prove this, he says: "It has been distinctly shown, by the analysis of D'SAUSSURE and BERTHIER, that the nature of a soil exercises a decided influence on the quantity of the different metallic oxyds contained in the plants which grew on it; that magnesia, for example, was contained in the ash of a Pine tree grown at Mont Brever, while it was absent from the ash of a tree of the same species from Mont La Salle; and that the proportions of lime and potash were also very different." Again he adds: "Let us now compare BERTHIER'S analysis of the ash of two Fir trees, one of which grew in Norway, and the other in Allerard, (departemens de l'Isere.) One contained fifty, the other twenty-five per cent. of soluble salts. A greater difference in the proportion of the alkaline bases could scarcely exist between two totally different plants."

Though it seems in all cases the oxygen was found nearly in the same quantities in each species, proving conclusively that while certain properties, such as some of the acids and oxygen, are always present in nearly uniform proportions, that it is not so with other substances; that they not only vary largely in quantity, but in some instances are altogether absent; that a tree, like an animal, has some latitude of choice in its food; and that the elements of the air are essential to the existence of both. This is perfectly in harmony with every day's experience of the different and diverse

soils we find the tree to grow and flourish in. It may be questioned, if a tree, which finds the proper constituent particles in a soil for its healthy growth, can ever exhaust any part of it to such an extent as to produce death, if the natural sources of growth continue to yield their supply from the atmosphere. A forest does not wear out the soil and die; on the contrary, we are indebted to its agency for the virgin soil we find under its boughs. It is the opinion of writers of high authority, that among our modern forest trees, there are some which have attained the great age of four thousand years; and it is said that "investigation of coal and lignite strata has proved the existence of trees of the same order as those now existing." If this be true, it proves positively that trees do not draw on the soil, so as to destroy themselves, or to impair the perfect development of their seed and fruit. But it may be said this is applicable to a state of nature. Well, this is just what I am endeavoring to show; that we have run contrary to this; and, from that cause, have produced an enfeebled race, which we are exposing to an uncongenial climate, and charging it (improperly, as I think), to the soil.

The reason why soils are worn out, is because of injudicious cultivation, a continued removal of its products without a proper restoration of the properties thus removed. This is not applicable to trees, only so far as the removal of fruit is concerned, and the obstruction of the natural supply from decayed leaves, branches, &c. This may be larger or smaller, and of course it is wise to see that the soil is well supplied with all the particles thus drawn from it. You may, however, feed the Pear tree as much as you please, and still it will die in the midst of a luxurient growth; and it is, therefore, to other causes that we must look for its destruction, not to the want of proper food.

The advocates of the insect theory have not been very successful in proving its truth. They are bound to show something more plausible for its support, than the simple fact that insects are found in connection with the diseased parts. They are bound to show that these insects are really the cause, and not there as a result of the blight. And, moreover, to show some reason why it is that they *discriminate*, pass by certain unmolested Pear trees, and do not make a clean sweep of all within their reach; and also, why it is that their destructive influence is sometimes suspended for years together.

Prof. HARRIS' description of the *Scolytus pyri*, in his invaluable work on Insects, which is mainly relied on as the support of this theory, fully defines its regular periods of change and operations. I am very sure that it will not apply to our blight, all the reasons for which I cannot here enumerate. Suffice it to say, that the injury of that insect "*ends* with the death of the *branch*, down to a certain *point*, but does not extend below the seat of attack, and does not effect the health of other parts of the tree." (Second edition *Harris' Treatise on Insects*). A comparatively harmless insect, whose effects all cultivators in this region will have observed on their trees.

I will here very briefly give what I deem the cause and the reason for the blight, which are not materially different from those given elsewhere. Long observation has confirmed my judgment that the disease is chargeable mainly to atmospheric influ-

ences. The Great Creator has in his wisdom so ordered it, that the vegetation, soil, and climate of every part of the globe act in perfect harmony, for the best development of the former. A departure from this state of nature is at the hazard of the health and longevity of the plant or tree, though this result does not invariably follow. The Pear tree, as before observed, is not a native of this continent, but of a different hemisphere, where it grows to large size and great age, as other forest trees do. All intelligent writers, so far as I know, are agreed that the improvement of the fruit has generally been at the expense of the hardiness and durability of the tree, (not a necessary consequence). However, we find it so. We have imported an enfeebled race, and are exposing it to a new climate, the vicissitudes of which it is not fully capable of resisting. I care not for terms: whether you call it *frozen sap blight*, or *sun blight*; whether the effect is produced by sudden and rapid changes of winter temperature, or an excessive summer sun. In either case, it is the destruction of the natural functions of the tree, producing disease and death. The former is often tardy in its work, but the latter generally rapid and instantaneous. In the one case, it is brought to bear on the tree in a state of rest, when the sap-vessels are contracted, when their juices have been expended to form wood, which is immaturely ripened. In the other case, when the sap-vessels are extended to their utmost capacity, to supply the demands of a rapid and luxuriant growth; when this growth is in its most tender and delicate condition, the scorching mid-day sun does the mischief; the sap, by its rays, is scalded and vitiated, a chemical process of decomposition takes place, its poison is soon carried to and mixed with other portions of the tree, and the whole is often irretrievably lost in a few hours. The only remedy is, the moment that it is discovered on the limb, where this form of blight always makes its appearance, to lop off until you come to the sound and healthy wood, and thus prevent its spreading. Do not stop to hunt insects, until you have performed this work, when you can do so leisurely.

Sun blight, or *fire blight*, is always most prevalent in a wet and hot summer. There has been but little the last three years, and we shall certainly have no frozen sap blight to complain of next summer. This is to be attributed to rather unusual dry summers during this period; the wood having ripened well before winter set in, and the growth not so luxurient as in wet seasons.

As a remedy, or rather a preventive to the frozen sap blight, I would suggest the shortening-in application, in September or October, to check the growth, and induce the maturing of the wood. This system is, perhaps, only applicable to dwarfs, as standards cannot well be reached. What is understood by shortening-in, is to cut back the present year's new shoots to the firm wood, say one-third or one-half of it, as the case may require, so that the sap remaining shall be expended in perfecting the wood which is left, and not to be stimulated by the leaves on the ends of the shoots to continue growth. This system is also practiced to force the tree into forming fruit spurs, and thus facilitate the production of fruit. Care must be observed in the time of performing this operation. It must not be so early in the season as to cause the bursting of the lateral buds, and thereby cause a more injurious growth than it is attempted to check. There need be very little risk in this; we must be governed by

the state of the season. It is better a little late, than too early; when the majority of the leaves on the shoot are rigid and hard, is a suitable indication of the proper time.

Having said so much about the want of hardiness of the tree, it may be asked, how I account for the trees that are to be found up and down our land, which have withstood the winter's storms and summer's heat from one to two hundred years? Before I answer the question, allow me to offer them as standing monuments against the exhaustion and insect theories. We have had some specimens in this vicinity—until the spirit of city improvements required their room, when the rude hand of the woodman brought them low—whose existence was co-equal with the first impress of civilization; they remained sound, healthy, and fruitful to the last. Such specimens, it will be found, have all originated from seed, and always from a hardier stock than the varieties of more modern introduction. A friend has just given me the history of one in Guilford, Conn., which he says is over two hundred years old, measuring fifteen feet in circumference at five or six feet from the ground. It is now beginning to decay, but yields a considerable quantity of fruit. He says the fruit does not compare with the best now in cultivation, but when he was a boy, more than fifty years ago, it was considered very superior.

It is to these hardy remains of ancient days, we must look for constitutions to hybridize with our finer sorts, say, if you please, the *Seckel*, which is as hardy as any of them, for a class of trees producing superior fruit, and, at the same time, such as we can trust out of doors.

I fear the above remarks may seem lengthy to some, but the subject is of too much interest to be passed over lightly, or with mere assertions. As it is investigated, the more fully its importance is brought to view. I have endeavored to avoid all improper allusions, unnecessary repetitions, and aim at display; simply confining myself to a plain statement of theories and opinions of others, their comparisons and plausibilities. Much might be added to sustain the views I have presented as the real cause of destruction of our Pear trees.

[The above paper was communicated by Mr. Ernst to the Cincinnati Horticultural Society, and subsequently appeared in the *Horticultural Review*. Mr. Ernst suggested that we would give place to it in this journal, which we now do with pleasure. It will well repay a careful perusal by every one engaged in the cultivation of the Pear. The disease which is the subject of remark, is a most mysterious one indeed; no less so than some of those fearful epidemics that make such deadly periodical attacks on the human species, and then disappear. The most watchful and skilful cultivators, and those who have had the most ample opportunities for observation, have been unable to do more than suspect or guess at the cause. Mr. Ernst's paper, unfortunately, able and careful as it is, throws no new light on it. From the beginning, many have held strongly to the opinion that "*it was chargeable, mainly, to atmospheric influences*," and as far as we are aware this is the opinion of a large majority now. Our own opinions are hardly worth giving, and at any rate the length of Mr. Ernst's article prevents us from giving them at this time.—Ed.]

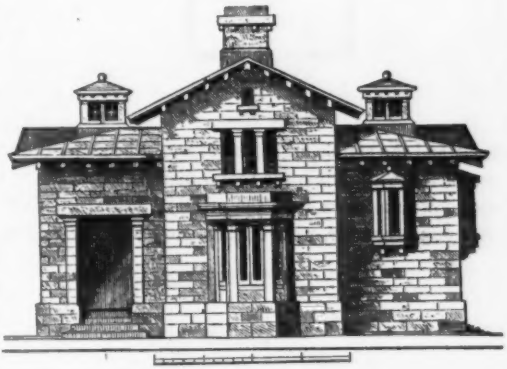
KIRRI COTTAGE.

SUBURBAN RESIDENCE OF MRS. CORNELIUS DAVIS, SENIOR, AT NEWARK, NEW JERSEY.

BY A. J. DAVIS, ARCHITECT, N. Y.

THE name is derived from the Japan tree, standing in the front ground; English name, *Pawlonia*. This tree, if not the most graceful in its form, is the fastest growing, most exotic looking, and the richest in its flower, of any in our latitude. It was planted in 1849, five feet high, without a branch, and now overtops the house.

A somewhat improved version of the building executed is given in the frontispiece, and has been studied by the architect with much care. It is offered as a practicable gothic cottage, cost not to exceed the sum of four thousand dollars, substantially built with brick, and stuccoed as at New Haven. We also give here an Italian version of the Kirri Cottage, which being in the ordinary style of building, would be more readily executed than the gothic, and at less expense. The plan would be much the same in both. The lot is 53 feet upon the street, and the house retires some 20 in its porch of entry. The grounds, in front, are filled with trees and shrubs, a catalogue of which is given,* in order that the same might be arranged upon an enlarged surface, with increased effect. These trees and shrubs were had of Mr. DOWNING, and comprise many of those in esteem by him, as rare and beautiful. Others were from HARVEY, Newark, and are all thriving in the grounds.



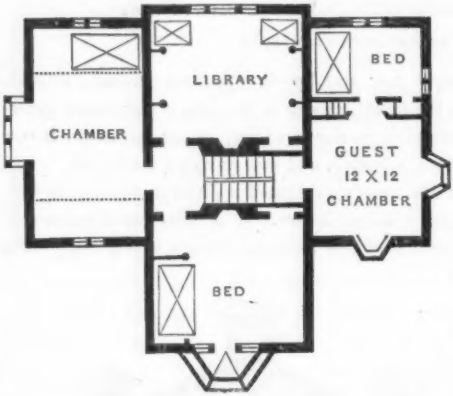
ITALIAN VERSION OF KIRRI COTTAGE.

THE HOUSE.—A walk, flagged with Saugerties stone, leads through thes hrubbery, to a porch of entry, open upon two sides, trimmed with gothic columns, under a pointed

* See Frontispiece. EXPLANATION.—A, Austrian, or Black, and White Pine. B, Bocconia and Althea. C, Chinese Evergreen Honeysuckle. D, Tecoma grandiflora. E, Exmouth Elm—a beautiful variety. G, Ginko, of Japan. H, Hemlock. K, Kentucky Coffee-tree; Gymnocladus. M, English field Maple. O, Osage Orange. P, Pawlonia imperialis; Keri, or Kirri, of Japan. T, Tree Pæony and Mezereon. V, Vines and Creepers. W, Ringlet Willow. X, Chinese Wistaria. H V, Himalaya Viburnum. Magnolias, Tulip tree, Willows, White and Black Spruce, Balsam Fir, Chinese and American Arbor Vitæ, Mountain Ash, Silver-leaf Abele, Carolina Syringa. Tree Honeysuckle, African and Double Altheas, Strawberry Tree, Hercules Club, Persian Lilac, Scarlet Maple, Horse Chestnut, Acacia, Yucca gloriosa, Climbing Roses, Sweet-scented Clematis, English Ivy, American Ivy, Commelina, Hollyhock, Garland Deutzia, Periwinkle, Moneywort.

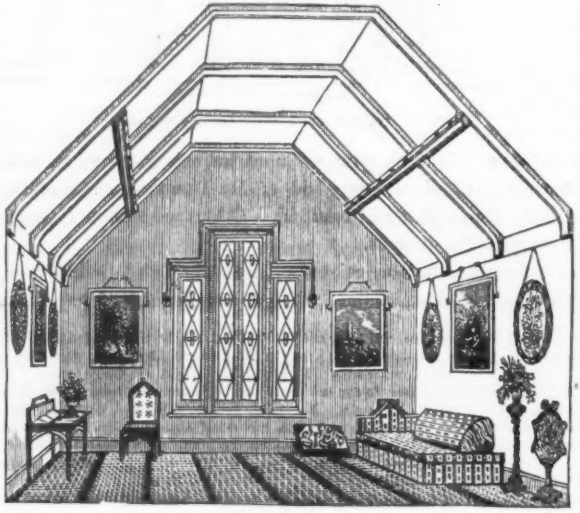
Of annuals, or greenhouse plants, the cottage is decorated by the Cobea scandens, Leptospermum, Maurandyas, Salvias, Tanych, Madeira, and Cypress vines. To which may be added the following hardy plants not successfully reared—Aristolochia, Periploca, Fumatory vine, Mahonia Holly, Japan Quince, Scotch Perpetual Rose, Oak-leaved Hydrangea, Cypress, Larch, Sweet-scented Shrub.

arch of four centers, with trefoil spandrels, splayed jambs, and hood mold. The principal floor is elevated four feet above the street. Front door—pointed head, six panelled; three glazed with stained glass; opens into a small lobby, connecting a front parlor with the back living-room; bed-room on the left; closets, with pantry on the right, with bath-room adjoining. Front Parlor—with bay window, commanding the street, and one side window looking east. A closet connects with the basement stairs.



GROUND PLAN.

Basement.—The rear portion is entirely out of ground, so that the kitchen, under the dining-room, and side store-rooms, are light and dry. The cellars are in front, and the station for a furnace would be under the right wing. This wing, not yet completed, will contain the rooms marked: the library, or office, and bath-room, half-way down the stairs, from the principal floor, yet on a level with the grounds in front. The guest-chamber, with oriel windows, and bed-room, half-way up, entered from a landing on the stairs.



VIEW OF FRONT BED-ROOM.

The second story contains the present library, over the dining-room, a chamber in front, with one large, or two small bed-rooms in the left wing. The chimney flues are brought together over an arch, and rise in one stack. Our view represents this stack, topped out with insulated shafts of brick, or terra cotta, linked together at top and bottom, and they may be ornamented upon their surface.

The parlor ceiling has the joisting, and plank, supporting the deafening, chamfered and planed to show, instead of plastering. The walls are painted fawn color, in oil, and the doors are imitation of black walnut.

The dining-room ceiling is plastered, and painted a lilac tint, with kalsomine, and the walls are papered, a light figure, upon a darker (chocolate), ground. Doors—imitation of mahogany.

The hall and stairway are painted grey stone color, in oil; the steps oiled and varnished, to bring out the grain.

The porch is fresco painted, and coursed off in imitation of free stone.

The library, or study, above, has the rafters, purlins, and plate, dressed to show to the peak. The intervals between the timbers are lined with canvass, and papered, white figure on a blue ground. Four of the rafters descend to the floor, forming alcoves, of depth sufficient for large books above, and shelves for papers below, covered with curtains, moving by rings over iron rods.

The front bed-room rises, also, into the roof, but is plastered between the beams, and painted in oil, a view of which is given. I prepared a view of this room at the solicitation of Mr. DOWNING, which may be found at page 385 of "*Downing's Country Houses.*"

Foreign Notices.

ACACIAS.—Of the whole class of New Holland plants, few are more interesting than Acacias. The strange variety in the phyllodes or leaves, the profusion and fragrance of their blossoms, and the season of the year when they are in the greatest perfection, render them eminently worthy of cultivation. My object, therefore, in the following remarks is to bring, if possible, this interesting tribe of plants more into notice than ever it yet has been; and with that view, I have sketched or drawn out the more prominent characters of a collection of twenty-five, well adapted for the conservatory border, shelves, or the greenhouse stage; but before I commence my enumeration, permit me to offer a few words common to the generality of those I intend bringing under notice:—First, I have to state that the whole of these Acacias are natives of various parts of New Holland; therefore enjoying a brisk growing climate through the spring months, and a dry atmosphere during summer. And thus we are furnished with two leading points whereon to base the successful cultivation of this genus; these are, to maintain such a condition of climate as will insure a quick growth, and when once that is obtained, nothing is better for ripening it than an exposure to bright sunlight, with a free circulation of air at all times. Second, Acacias generally seed well; and thus propagation is rendered easy, as the seeds germinate freely, either when sown as soon as they are ripe, or kept back until the ensuing spring. In the latter case, they must be soaked in hot water. I have, however, seen seeds which have fallen from *cyanophylla* and other species spring up as plentifully as Sycamore. Another mode of propagation is by means of cuttings placed in sharp sand, and the pots placed on a warm greenhouse shelf for a month or six weeks, and then introduced into a growing temperature of about 70°, taking care to have the cuttings covered with bell-glasses, until roots have been freely emitted; afterwards, pot off singly, and place them again in the same situation, until they have got well established, when nothing more is needed than ordinary attention. The soil most suitable for the Acacia is three-quarters good turfy loam, with the remainder made up of peat and sharp sand. Another point, which I think is not generally known, is that the generality of them, although very gummy, stand the knife well, without appearing to suffer from its effects; at least, with some species, its application is absolutely necessary, in order to form good specimens, and keep them within bounds.

A. armata.—This is a valuable species, not only on account of the late period at which it flowers, but likewise on account of its large bright yellow flowers, which are produced in profusion, in globular heads, situated on a peduncle one inch in length. This kind is best adapted for pots.

A. alata.—In this the stem and phyllodes are all flattened, and every secondary branch is connected with the midrib of the primary one. The phyllodes are so connected as to assume the form of one long narrow phyllode, thickly beset with hairs, and furnished with short spines at intervals on each side. The flowers are all attached in pairs to the midrib of the primary phyllode, and diverging alternately right and left on each side, to the number of about 30, on a phyllode of about four inches long. Peduncle about three-tenths of an inch in length; flower heads globular, pale yellow. This forms a straggling bush, requiring to be upheld with stakes. It is most suitable for conservatory borders.

A. biflora.—This is a delicate but pretty species, and well worth cultivating. Phyllodes triangular, sharp spined, much resembling an Apacris, 1-5th inch long. Peduncles about the same length, bearing two very small white flowers. This plant must be kept in a pot, and clear of other plants, and it will require stopping to make it bushy, otherwise it will soon become weak and straggling.

A. cochlearis is neat and compact, and well adapted for large pots and the margins of conservatory borders. Height, six feet. Phyllodes two inches long, linear, pointed, but not stiff, rather hoary. Flower heads globular, small, produced in pairs, from the axis of the phyllodes. Peduncles two-fifths of an inch long. This is a plant of rather slow growth, and it requires no pruning.

A. celastrifolia will flower well, even in small pots, but in 13-inch ones it forms a huge bush, loaded so completely with flowers as hardly to render either phyllodes or pot perceptible. Phyllodes about three inches long, and 1¼ inch wide; branches forming, as it were, a very long panicle, from thirty inches to three feet long; flowers whitish, sweet scented. This species is very subject to scale, the best way of clearing which off is to cut it well in after flowering, and not to be sparing of soft soap and water; or, best of all, use Dominy's mixture.

A. cyanophylla.—This forms a splendid object for the center of a lofty conservatory, growing as it does to a great height, and producing large loose panicles of exquisitely bright yellow flowers, which are large and highly scented. Phyllodes ten inches long, and 1¼ inch or 1½ inch in diameter, very wavy, unequal sided. This plant, like *celastrifolia*, requires a periodical cleaning; it also stands pruning well, and it is much improved by it. No one in possession of a large conservatory should be without this desirable species.

A. cygnorum has rather a pendulous habit, its branches being very slender and almost covered with small pinnated leaves, which are composed of three pairs of leaflets, and it is also studded with sharp spines; leaflets 1-6th inch long. Flowers much like *rotundifolia*, but smaller. This is certainly an excellent Acacia where variety is wanted, and it is admirably adapted for pots.

A. Drummondi. — What is there to be desired in an Acacia that is not to be found in this? Its habit, which is at once neat and compact, and its flowers, which are conspicuous and produced in profusion, at once place it in the first rank. Its leaves are bipinnate, about an inch in length, formed of three pairs of leaflets, from three-quarters to one inch long, composed of three pairs of pinnules, which are of an oblong shape, 3-10th inch long; and the petiole of both the primary leaves and leaflets is slightly extended. Flower heads oblong, about an inch long, placed on a peduncle, about the same length, produced singly. Every one who only has room enough for one Acacia should endeavor to obtain this one. The best place for it is the conservatory shelf.

A. dependens. — This is adapted for conservatory borders or large pots. It is of an upright growth, of a very dark color, and has linear phyllodes an inch in length. Spikes of flowers 1½ inch long, of a light yellow color, and not particularly conspicuous. This is a species that can be kept to any shape by means of the knife.

A. diffusa is suitable for pots, but it is loose in character, and requires the use of ligatures to make it assume a nice shape. It makes shoots about one foot long in a year, and furnishes them for about nine inches in length with flowers, which are produced in pairs from a single phyllode, or in fours, fives, or sixes, when a pair or three phyllodes occur close together. Peduncle about 2-5th inch in length; phyllodes linear, one inch in length; margins of the phyllodes running into a sharp point at the apex. Well worth cultivation.

A. grandis.—This is one of the neatest and best of the genus for pot culture, forming as it does, by simply stopping it, either a dense bush, or, with a little more attention, a fine pyramidal specimen; grown in the latter form it is certainly extremely ornamental, either on a greenhouse shelf or the margin of a conservatory border. Its leaves are pinnated, about 3-5th inch in length, formed of eight pairs of leaflets, about ¼ inch long; flowers globular, produced from the axil of each leaf, either singly or in pairs; peduncle ¼ inch in length. This is a plant that deserves to be in every collection.

A. iziophylla is not one of the best, but its earliness renders it worthy of cultivation. It is well suited for pot culture, making a very pretty bush under ordinary attention. Its phyllodes are linear, about 1½ inch long; flowers small, globular, produced singly from the axis of the phyllodes. Peduncles 3-5th inch in length.

A. lineata in all its stages makes a fine pot plant, but being of rather weak growth the use of sticks and ligatures is necessary in order to form a nice specimen. A strong plant under ordinary

circumstances will make shoots in one year from twenty inches to two feet, producing flowers during their entire length, with the exception of an inch or two at the base. Flowers in pairs at the base of each phyllode; peduncles 1-5th inch long; flower-heads globular, small, of a bright orange yellow; phyllodes 2-5th inch long, linear, with the upper margin rounded at the apex and forming a point. One of the earliest and best of the Acacias.

A. longiflora major.—This is a neat kind for a small conservatory border; for when in blossom its bright yellow oblong flower-heads render it a most conspicuous object. Phyllodes linear-lanceolate, four inches long, and 2-5th inch across at the widest part; flower-heads about 1½ inch long, sessile, in pairs, diverging right and left from the axils of the phyllodes, and produced for about eight inches along the branches. Habit, upright, thin of branches, and inclined to become straggling when well flowered. This is a splendid Acacia, but being difficult to propagate there are but few plants of it in the country.

A. lophantha is best suited for the border of a large conservatory, where it is much esteemed, not for the sake of the flowers, (for they are produced but sparingly) but for its fine spreading foliage, consisting of leaves nine inches long and five inches wide, formed of ten pairs of leaflets, and each leaflet composed of from fourteen to twenty pairs of pinnules. Pinnules half an inch in length, and one-eighth inch wide; flower heads solitary, of an oblong shape, from 1½ inch to two inches long, and of a light color; peduncle about three inches long. The knife must not be used for this plant.

A mucronata.—This species is well adapted for conservatory borders; its phyllodes are two inches long, being twice the length of those of *dependens;* but in all other respects they are similar.

A. nigricans has much the appearance of *grandis*, but close inspection will at once show the difference, for instead of eight pairs of leaflets constituting a leaf, there is but one pair in this species. Leaves bipinnate; leaflets formed of five pairs of pinnules, which are one-sixth of an inch long; flower heads globular, produced in pairs from the axis of the leaves; peduncle half an inch long. A very good plant for a pot, but better adapted for the margin of a conservatory border.

A. pubescens.—This is a neat plant for a pot or small conservatory border, being rather delicate and much inclined to assume the umbrella shape. Stem pubescent. Leaves bipinnate, about 1½ inch long, primary leaflets about 3-5ths inch long, of which eight pairs constitute the leaf. Leaflets formed of twelve pairs of pinnules of about 1-10th inch long; racemes produced singly from the axis of the leaves, about three inches long; flowers globular, small, yellow. A rather slow growing species, which will not stand pruning.

A. pulchella is best adapted for the margin of conservatory borders, or for the center of a circular bed which is to be filled with dwarf plants; for by means of the knife you have free control over its shape and habit; its height is from six to seven feet, and it forms as dense and compact a bush as any plant with which I am acquainted. Leaves about 1-5th inch long, formed of four pairs of leaflets, which are 1-10th inch each in length. Flowers globular, small yellow, produced singly, and furnished with a spine on each side of its base. Peduncle 2-5ths inch long. For a low bush, in a conservatory border, this stands almost unequalled.

A. pentadenia is another fine Acacia, well adapted for pot culture. Branches erect; and altho' making a nice compact bush, it does not become too dense, but is of a nice slender and open character. Leaves bipinnate, composed of two pairs of leaflets, the lower composed of seven pairs of pinnules, and in length about half as long as the upper ones, which are composed of twelve pairs of pinnules. Flower heads globular, produced in twos, threes, fours, or fives, from the axis of the leaves. Peduncle one-half of an inch in length. A nice plant for a greenhouse stage.

A. præmorsa.—This has a rather straggling habit, but it is well adapted either for pots or borders, and certainly makes handsome plants when about three feet high, though it will require skillful management in training to prevent its becoming unsightly from the loss of its lower phyllodes. The latter are triangular, one-third inch long. The branches grow about one foot or

fifteen inches in the course of a year, and are covered with flowers from the apex to the commencement of the season's growth. Peduncle ½ inch long; but its phyllodes are almost hid by its profusion of flowers. Altogether a pretty plant.

A. *paradoxa*, although of straggling growth, is suitable for pot culture, standing the knife well; phyllodes one-half inch in length, very wavy, unequal sided; situated very closely together along the stem, furnished with two sharp spines at the base of each, rendering the plant very prickly by their stiffening as they grow old. Flowers globular, of a bright yellow, produced very plentifully. Peduncles the same length as the phyllodes.

A. riceana.—This forms a magnificent plant for a large conservatory, towering to the height of some twenty-five feet, and producing long pendulous branches hung their whole length, as it were, with numberless bunches of flowers. The latter are sessile, arranged upon a peduncle of from 2½ to 3 inches long. The phyllodes are 3-5ths inch long—linear, stiff, and nearly as sharp as needles when they get old. This plant is capable of being trained into whatever shape you may require it. It also bears the knife extremely well, and is a most abundant flowerer.

A. rotundiflora forms a loose spreading shrub, of about three feet high, and as much in diameter; it is most suitable for pots. Phyllodes one-half inch in length, somewhat rotundate, rather pubescent, and deep green; flowers globular, bright orange yellow, solitary, sometimes in racemes of two to four heads; peduncle ¾ inch long. This is by no means a plant of fine habit when allowed to assume its wild form; but with judicious pruning, and by training tastefully upon a balloon-shaped trellis, allowing the shoots to hang gracefully from the top, its appearance is greatly improved, and when in flower it forms a worthy inmate of our greenhouses.

A. verticillata.—This is one of the most interesting, and, at the same time, most beautiful and conspicuous, of Acacias, and well worthy of a prominent position either on the greenhouse stage, conservatory shelves, or in the borders, where its graceful habit must render it a favorite. Its phyllodes, as its name implies, are arranged in a verticillate manner, although in broken whorls of about 1-5th inch apart; the phyllodes are about 3-10ths inch in length, linear, stiff, and very sharp pointed. Its flower heads are about an inch in length, of an oblong shape, and seated upon a peduncle of about 3-10ths inch long; in some cases they appear singly, in others four or five flower heads are so arranged as to appear verticillate. Nothing is better than to allow this species to take its own natural habit, for the use of the knife or ligatures would not improve it.

The following alphabetical list will show at a glance the time of flowering, form of flower, &c., of the various sorts just described:

Name.	Time of Flowering	Form of Flower Heads.	Size, &c.
Acacia armata	Late	Globular	Large
" alata	Late	Globular	Middle
" biflora	Early	Globular	Small
" cochlearis	Middle	Globular	Middle
" celastrifolia	Early	Panicled, globular	Middle
" cygnorum	Middle	Globular	Small
" cyanophylla	Middle	Panicled, globular	Large
" Drummondi	Middle	Oblong	Large
" dependens	Middle	Panicled, oblong	Small
" diffusa	Middle	Globular	Middle
" grandis	Late	Globular	Large
" ixiophylla	Early	Globular	Middle
" linearis	Early	Globular	Middle
" longiflora major	Middle	Oblong	Large
" lophantha	Early	Oblong	Large
" mucronata	Middle	Spiked, globular	Small
" nigricans	Late	Globular	Large
" pubescens	Middle	Globular	Small
" pulchella	Late	Globular	Small
" pentadenia	Late	Globular	Middle
" præmorsa	Middle	Globular	Large
" paradoxa	Middle	Globular	Small
" Riceana	Early	Spiked, globular	Large
" rotundifolia	Early	Spiked, globular	Large
" verticillata	Early	Oblong	Large

—*J. A. Beckman, in Gardeners' Chronicle.*

THE SALISBURIA, OR GINKO TREE.—We find the following notice of this beautiful tree in a late number of the *Gardeners' Chronicle*. It is perfectly at home in the climate of Rochester:—

"In the scramble after novelties there is a risk that one of the most valuable of the exotic Coniferous trees grown in Europe may be forgotten. It would be interesting to know what proportion the sale of the Ginko Tree, or *Salisburia adiantifolia*, bears to that of such plants as *Taxodium sempervirens*. We suspect that the demand for it is almost nothing, judging from the very few places in which it was ever seen. And yet it is a noble tree, of singular as well as beautiful aspect, as hardy as a Poplar, and, when old, of gigantic stature. Its only fault is being deciduous. Here and there large trees may be met with, looking in mid-winter like vigorous Pear trees. But to growers in general the plant is scarcely known.

An interesting account of the tree as it now exists near Montpellier, for which we are indebted to M. CHARLES MARTINS, has drawn attention once more to the peculiarities of Salisburia, and we hasten to avail ourselves of some of his facts.

In Japan, of which it is a native, as well as of some of the coldest parts of China, it is looked upon as a kind of Walnut, and acquires very considerable dimensions. A specimen, growing by a Pagoda in the neighborhood of Pekin, is recorded by the Russian traveler BUNGE to measure thirteen yards in circumference, and to have a prodigious stature. In the Botanic Garden of Pisa is one about twenty-five yards high, and a yard in diameter at its base; and near Montpellier grows another, of which the following is the history, abridged from M. MARTINS report.

In the year 1788 BROUSSONET, who was then in London, sent to Prof. GOUAN, of Montpellier, a plant of this species, for which he was indebted to Sir JOSEPH BANKS. In 1812, twenty-four years after being planted, the tree flowered. At that time it was nine and a half yards high. In June, 1835, it was rather more than seventeen and a half yards high. On the 7th December, 1853, its stature was determined by careful measurement to be nineteen and three-quarter yards, or a trifle more. From this it appears that it lengthened on an average not quite a foot annually; but it in reality grew nearly three times as fast in the first forty-seven years as in the last eighteen.

The spread of the branches was rather more than seven and three-quarter yards in 1812, 11¾ in 1835, and 14¼ in 1853.

The diameter just above the roots increased at the following rate:—In 1788 it was 3 millimetres (1 year old); in 1812 it was 239 millimetres (29 years old); in 1835 it was 605 millimetres (47 years old); in 1853 it was 887 millimetres (65 years old).

In another case, in the Garden of Plants at Montpellier, a Salisburia gained in 58 years a diameter of 672 millimetres.

The annual growth of the first in diameter is thus seen to have been about 13.64 millimetres; that of the second to have been about 11.6.

In comparing this rate of growth with what has been observed in other Conifers, M. MARTINS records some very interesting facts. In the Botanic Garden of Montpellier, within a hundred yards of the last named Salisburia, grew a noble Spruce, which had been planted in 1688. Circumstances led to the removal of the tree when 160 years old. A round of the butt having been preserved, showed that its diameter had increased thus:—When 24 years old its diameter was 152 millemetres; when 47, it was 272; when 58, it was 316; when 65, it was 350. It therefore had not grown half so fast as the first Salisburia mentioned above.

The Scotch Pine (*Pinus sylvestris*) affords similar means of comparison. We here translate M. MARTINS literally:—'In every latitude comprehended between 49° and 70° N., that is to say, from Haguenau on the lower Rhine, as far as Kaafiord in Lapland, the annual layers of the Scotch Fir diminish in thickness from the center to the circumference. This decrease is rapid, in proportion as the trees are more and more northern. As a term of comparison, I give below, in millimetres, the mean thickness of the layers, up to 100 years, of a large number of Pines observed at Kaafiord, in Finmark, (lat. 70°); at Pello, in Lapland (lat. 67°); Geffle, in Sweden (lat. 61°); Halle, in Germany (lat. 51°); and Haguenau, in France (lat. 49°). At Kaafiord the mean annual thickness of the layers of wood is 0.0009m.; at Pello, 0.0011; at Geffle, 0.0018;

at Halle, 0.0019; at Haguenau, 0.0032. The mean thickness of the two Salisburias above referred to being 0.0065 m., it is clear that they grow much more rapidly than the Scotch Fir, even in Haguenau, in the climate of Alsace. It would be a great mistake to suppose that there is no parallel between the growth of the Scotch Fir in the north of Europe and that of Salisburia at Montpellier. In reality, it is in the middle of Sweden that Scotch Fir attains its greatest magnitude. Near Geffle and Upsal, the tree becomes colossal, because it finds itself in a climate that suits it. The summer is, however, too short to enable the annual layers of wood to gain great thickness, and in winter, vegetation is totally suspended.'

Thus, facts seem to show that Salisburia deserves to be much more generally cultivated than it is. According to M. Martins, and others, the wood is dense and strong—not unlike that of the Orange tree, and by no means resinous; and when the female trees have a male branch grafted upon them, which is easily done, they produce their fleshy fruit in abundance, which, if not of value for useful purposes, have, at least, the merit of being ornamental.

The Perpetual, or Tree Carnation.—The appearance of a few plants of this charming flower at the exhibition of the Horticultural Society at Chiswick on Saturday last, reminds me that a few remarks respecting it at this season may possibly prove useful. This variety is commonly called the Winter-flowering Carnation, from the desirable characteristic it possesses of blooming throughout that season. The name of Tree Carnation may be familiar to some, as the plant itself is not of recent introduction, although very few varieties seem originally to have been known, and those have now been entirely superseded by sorts lately imported; for it is our continental neighbors who have been so successful in raising them, and to whom we are principally indebted for these invaluable acquisitions; for not only are the varieties now more diversified in color, but their growth and habit are altogether improved. In addition to their bright and varied colors, they are deliciously fragrant, a desideratum which cannot be too highly appreciated, some of the varieties being equal in perfume to the common Clove. Persons desirous of cultivating this tribe of Carnations should procure nice young plants, say in March, and keep them in a cool frame until the weather permits them to be exposed entirely to the open air; but, even in spring the lights should be taken off whenever it is practicable. Those who have old plants should strike cuttings about the middle of March, as young plants grow rapidly throughout the summer, and make by far the best specimens for winter blooming. Before taking cuttings, the plants should be put into a warm house, or one that is kept rather close; and those who have not this convenience should put them in the warmest part of the greenhouse; if this is done, the plants are excited to grow, and if the cuttings are then taken off, they will strike root more readily. Care should be taken to strike only from vigorous plants, and to select strong and healthy cuttings; for if this is not done, and the cuttings are taken from delicate and cankery plants, the colors of some of the varieties are inclined to run, besides which, the plants always maintain a sickly appearance. Tree Carnations will supply an abundance of cuttings, as most of the varieties continually throw out a profusion of laterals, which can be taken off at any season without injury to the parent plant; indeed, taking a few of them off in autumn has rather a tendency to strengthen the flowering shoots than otherwise. To insure cuttings taking root, either late in autumn or in spring, they must be struck in a little heat, but the cutting pots should not be covered with a glass, for if this is done, the cuttings will fog or damp off; besides which it is not necessary; and if no glass be used, they will want occasionally looking over, and any grass carefully removed that is likely to create damp. After the cuttings are well rooted they should be potted singly into, say, 4-inch pots, and kept in a rather close and moist atmosphere until fully established, when they should be gradually hardened off in a cool frame. At this stage the tops may be pinched out, which will greatly assist the formation of nice plants. To those who have not the convenience of supplying warmth for striking cuttings during winter, I should recommend their being struck at the latter end of summer, to be potted off and kept in a cool frame during the winter, care being taken to keep them rather dry—a rule which should always be observed in wintering Carnations. The cutting pots should be prepared by first giving a good drainage of any sherds of a porous nature, then a few

rough pieces of turfy loam to prevent the soil from being carried through the sherds; after this, take equal proportions of loam and silver sand, mix together, and fill within a quarter of an inch of the rim, then complete by filling up with silver sand. Tree Carnations will thrive luxuriantly in a good maiden soil or loam mixed with a little silver sand, to which may be added a slight sprinkling of leaf-mold; the same soil may be used throughout the season, except when the plants are first shifted from the store pot, when a little more silver sand should be used. In spring the plants should be removed from the frame, and placed upon an open border, in any favorable situation; but first prepare it by spreading a thin layer of ashes, which will prevent worms from entering the pots. If at this time the plants require potting, a shift should be given them, but care must be taken not to over-pot them. I find that many varieties thrive better if gradually shifted into their blooming pots, say from 3-inch into a 6-inch pot, and so on in proportion. The plants are comparatively no trouble during summer; they merely want watering, and sometimes stirring up the surface soil; but as they grow, care must be taken to secure the stems nicely with some neat sticks. The principal insects that attack them are green fly; which is easily removed by sprinkling with a little tobacco-water. If the weather and situation prove excessively hot in the summer, the plants may be removed with advantage to a border that is slightly shaded from the mid-day sun. If the above mode of treatment is followed, by the autumn the plants will have thrown up from three to eight stems each, and be laden with a profusion of buds, which, if the plants are removed to a greenhouse as soon as the weather is beginning to get damp and cold, will expand, and afford a continuance of blossoms throughout the winter. These Carnations are not only valuable for their display in the greenhouse, but are, I may say, unequalled as a winter flower for the boquet and other purposes to which cut flowers are applied. The following are the names and colors of 12 of the best and most distinct varieties: —*Attila*, scarlet and white flake; *Belle Zora*, salmon pink, striped and mottled with crimson; *Cassandra*, bright cerise; *Gertrude*, lavender, mottled with white; *Incomparable*, deep rose, striped with crimson; *La Sermi*, blush white, mottled with rose; *La Vestale*, scarlet self; *Le Zephir*, purple; *Madonna*, blush, striped, and mottled with crimson; *Proserpinr*, large dark crimson; *The Baron*, white, mottled with rose on the edge; *Union*, crimson mottled with white.— *W. B., in Gardeners' Chronicle.*

Spiræa callosa, *Thunberg*, alias *S. Fortunei*. Planchon.—Under this name a very pretty red flowered shrub is becoming common in collections, having been introduced from China by Mr. Fortune. With us it is too apt to form leaves rather than flowers, but the rich ruby tints of such as do appear resemble clusters of gems set in green foliage; in a hot summer we have no doubt the blossoms would be abundant. Such, indeed, would seem to be the case on the continent, if we may trust a figure in the *Flore des Serres*, where M. Planchon has changed the name to *S. Fortunei*. It is there represented as bearing great corymbose panicles of a blood red color, producing a far more striking effect than anything we have seen in England. M. Planchon thinks that this is not the *S. callosa* of Thunberg, and, therefore, changes its name, and we say very needlessly. His reasoning upon the subject would be admissable, had Thunberg been a botanist upon the exactness of whose descriptions any reliance could be placed; but as he was just the contrary, his plants, where authentic specimens are unattainable, as is the case here, are so many puzzles, to be identified by probability, rather than by what he says or omits to say. No one, we suppose, can doubt that his plant was some common red flowered Japanese Spiræa; that the present plant undoubtedly is; and it answers to his words as well as plants usually do. M. Planchon has no evidence that the plant was not *S. callosa*, there is a fair probability that it was; and we cannot perceive the wisdom of perplexing the world with yet another alias, when the only reason assignable for doing so is mere conjecture. In the absence of direct proof, one conjecture is as much entitled to attention as another. But the mania for changing names seems incurable, and we shall now have nurserymen selling *Sp. Fortunei* as a fine new Japanese shrub to the very persons who already have it growing in their shrubberies under the name of *S. callosa*. —*Gardeners' Chronicle.*

Editor's Table.

THE SEASON, FRUIT CROP, &c.—The season, up to this date, (June 20th,) has been highly favorable to vegetation. From the opening of the buds we have had no violent changes—no cold cutting winds, such as we usually experience during the season when fruit trees are in blossom. During six or seven years past we have not seen so little of the curl in the Peach as we have this season. The trees have somewhat of their former vigorous and healthy look, and as a general thing are loaded with fruit. Trees that have not yielded a single perfect specimen in four or five years, are now bending under the weight of fruit. All around us we see nothing but destruction to the tree, unless thinning be properly attended to.

The earlier Strawberries are now brought freely into market. The *Early Scarlet* and *Burr's New Pine* are the two leading sorts here at present. We have been endeavoring to clear up the confusion which exists in regard to the Cincinnati varieties, but find it a difficult matter. We cannot find any one who is absolutely certain that he has the genuine sorts. We have obtained new sets of plants, and we shall not feel satisfied until we have fruited them next season.

The earliest Cherries are nearly gone. *Belle d' Orleans* was the first with us (our season is ten days or more later than usual.) *Early Purple Guigne* and *Bauman's May* come next; and then *Early White Heart*, *May Duke*, and *Coe's Transparent*. *Gov. Wood* will be ripe in a day or two; and we must say again, that this is an unequaled variety—large, handsome, early, delicious, and a most abundant bearer. Our friend ELLIOT may extol this variety as much as he pleases; he cannot over-rate it. The *Early May*, or *Indulle*, is of no great consequence. The tree is small, and makes a pretty little bush for the garden; but nurserymen will find it not very easy of propagation.

Roses are now in perfection here, and so are the *Pæonies*. We have never seen the display of both so fine in the gardens and nurseries here. We hope to have some notes for next month. The Genesee Valley Horticultural Society holds its midsummer show on the 24th.

CALIFORNIA GRAPES.—Mr. M. WALTHALL, Jr., of Stockton, Cal., writes us to know the name of a Grape which is almost the only one grown there. He says, "The wood is vigorous, short-jointed, and light yellowish in color. Leaves—light green, smooth underneath, with large red veins, and in form resembles the drawing of the *White Grape* Currant in the January number of the *Horticulturist*. Bunches—large, long, and loose, slightly shouldered. Berries—perfectly round, black when ripe, except when shaded they are whitish. Skin—thin, little or no pulp, juicy, and sweet. What is it?" Undoubtedly some European Grape that has been carried there; what it is we cannot say.

TO CORRESPONDENTS.—Will "AGE OF PROGRESS," who dates his letter at Cincinnati, be kind enough to send us his address?

British Queen Strawberries.—On the 14th of June, while on a visit at Newburgh, we went in company with Mr. Saul to see the famous *British Queens*, of Dr. Hull. The place has now passed out of the Doctor's hands, but the Strawberry beds are there as usual, under the care of the same man who was gardener for the Doctor. We found a very fair crop on the plants, a good crop indeed for this country, although a considerable quantity had been gathered. The plants were set in rows 15 to 18 inches apart, and the ground was covered with straw between the rows to keep the fruit clean. The gardener informed us that the crop was smaller than usual, as the bed was old and many of the best plants had died out. He said they had not been mulched with tan, nor had any special care or application of any kind. He spoke unfavorably of the use of tan—thought it killed the plants in many cases, and said that Dr. Hull had changed his views in regard to its effects. He thinks (and we pretty much agree with him), that one of the chief causes of Dr. Hull's success was his deep trenching (four feet) of the ground, and enriching with well prepared composts, and afterwards working in poudrette and street sweepings. Mr. Downing, it will be remembered, thought that the great point in the American culture of these *Pine Strawberries*, was to keep them warm in winter and cool in summer, by means of mulching. One thing is very certain, they cannot be grown so easily as the *Scarlets;* but when Dr. Hull succeeds on the top of a high hill on very dry ground, we know of no good reason why others cannot succeed in more favorable locations.

Caterpillars.—About the middle of June, the trees in New York and Brooklyn were infested with swarms of caterpillars. Elms were everywhere completely stripped, but Lindens, Horse Chestnuts, and in fact all save the *Ailantus*, had suffered seriously. The air was filled with the caterpillars suspended by their silken invisible threads, so that persons walking in the parks and along the side walks, often found themselves in very disagreeable company. We were surprised to find that no special effort was made to abate such a nuisance. The workmen employed in dressing the grounds in the Park, at the Battery, were in the midst of the insects, without seeming to be aware of their existence; and we saw them along the streets of Brooklyn, dangling in thousands by the doors and windows of elegant residences without being molested. It is a great pity that some destructive measure had not been taken while the insects were young, and before they had scattered themselves over the trees. As it is, we should think something might be done. A powerful stream of water, turned upon the trees by means of a garden engine and a piece of hose, might be effective to some extent in bringing them down. It is certainly too bad to permit them to defoliate the trees, and accomplish their transformation undisturbed.

Wisconsin Strawberries.—We are indebted to our friend A. O. Babcock, Esq., of East Troy, Walworth Co., for a very acceptable mess of ripe Strawberries, the first we have seen this season. They were mostly *Burr's New Pine*, with a few *Early Scarlets*, and in size and flavor not easily matched anywhere. Mr. Babcock informs us that he picked his first mess of Strawberries on the 31st of May, and that he has now *fourteen* different varieties growing in his bed. Of these, for a hardy, productive, and early plant, he gives the preference to *Burr's New Pine*. We have rarely seen or tasted berries of as large size, or fine flavor, as the specimen he sent us.—*Milwaukee Daily Sentinel, June* 8.

The varieties noted above were not ripe at Rochester until about the 13th or 14th of June. Our first picking of *Early Scarlet* was on the 13th. There is not usually so wide a difference between the climate of that part of Wisconsin and Western New York, but there the spring was earlier than usual, and here later.

Our correspondent, H. W. S. CLEVELAND, Esq., who has contributed to the pages of this Journal since its commencement, has sold his fine farm near Burlington, N. J., and is about to take up his residence somewhere in New England. He cannot but feel something of regret at parting with the orchards, vineyards, gardens, and graperies, to which he has devoted so much attention for many years. We wish him a favored spot for his new home, and hope to have an early account of his improvements.

A FINE HEDGE OF BUCKTHORN.—The finest Buckthorn hedge we have seen in this country, is that enclosing the grounds of ELON HUNTINGDON, Esq., occupied by R. MATTISON & Co.'s nursery, in the north part of the city of Rochester. It is some six or seven years old, about five feet high, and between three and four feet wide from bottom to top, and impenetrable to the sight as a stone wall. Its effect upon the ground enclosed, and indeed upon the neighborhood, is imposing and beautiful.

AN INTERESTING LETTER FROM MICHIGAN, ON VARIOUS TOPICS.—What shall we do to get rid of the Peach worm? It seems to me most writers on fruit-culture entirely under-rate the mischief they do. This is certainly the case, if they are as troublesome in other parts of the Union as in this vicinity. In clay soils, and where the trees stand in a lawn or grass plat, they are less troublesome; but unless some remedy shall be found, the culture of the Peach in gardens, especially where the soil is sandy, will be abandoned in a short time, in this place. Some of our most zealous and intelligent amateur cultivators are ready to give it up in despair. Exterminate the worms ever so carefully with the knife or boiling water, and apply ashes *faithfully*, as directed in books, in the fall you find the worms have made a lodgment in the roots of your trees. If the trees are small, you find them nearly or quite girdled, or so injured that the cold of the following winter kills them; and hundreds of large trees are dead, or are dying a lingering death, by their means. Tobacco has been used heretofore with success; but that fails *now*. A citizen of this place says he has used coffee-grounds placed around the tree, with good effect; but a single season's trial of any thing is insufficient, especially when it has been used on two or three trees only. I last year applied lime to two trees, in the manner recommended by J. C. WRIGHT, in the *Horticulturist* of 1851, page 169. The earth was removed so as to form a basin around the tree, four or five inches deep; this cavity was filled with what masons call putty, that is, a paste made of lime, rising two or three inches above the surface of the ground. This formed a cement impenetrable to the grub; and on examining these two trees a few days since, they were found free from worms, while others standing near, which were treated differently, were seriously injured by them. Whether any bad results might follow the application of this remedy to very young trees, or when growing rapidly, or whether it would be as successful as in this instance, is yet to be determined. (1)

The cold of the past winter has been unusually fatal to trees, shrubs, and plants, here. The mercury did not sink lower than it frequently has done before, but the ground was bare, almost the entire winter, and the changes from moderate to cold were frequent and sudden. Strawberries, unless fully protected, have been generally killed. A great many Peach trees, especially those that had been injured by the worm, have died. A great many dwarf Pears have died; the Quince roots and stocks, up to the union with the Pear, being black, while the Pear-wood and bark appeared healthy. (2) I confess I felt rather sad when I pulled up a number of trees, that in the fall appeared every way promising, and used them for Pea sticks. Well, if we had no troubles of this sort, I suppose fruit-culture would be too much as ADAM had it, when he commenced gardening.

Isabella Grape vines in my garden, an inch or more in diameter, have been killed to the ground. In this vicinity, the *Isabella* is much more liable to be winter-killed than the *Catawba*. The lat-

ter ripens its fruit here well, if it has an open or sunny aspect, and is, in my opinion, greatly superior to the former. Is not this semi-tenderness of the *Isabella* corroborative of its foreign origin, which many assign to it? (3) Speaking of Grapes, why is it that some of your Rochester pomologists so "set up" the *Clinton* Grape? It is hardy and prolific; that is all I can say in its favor. What its merits as a wine Grape may be, I know not; but as a dessert fruit, it is inferior, decidedly, to many of the native Grapes found in Connecticut and Massachusetts. Last season I allowed some bunches to remain on the vines until my *Catawbas* were ripe, and even then one could say they were "sour," without being called "foxy." It may do in 45° N. latitude, where they cannot grow any thing better. (4)

Our prospects for most kinds of fruit this season, are very good. The Peach trees, that are alive, have generally fruit enough on them.

The curculio is much less troublesome this season, thus far, than usual. Have they, too, been killed by the winter?

I think we shall have a fair crop of Plums. Our standard Pear trees are generally small as yet; but these young trees have generally fruit on them, enough to give us a foretaste of good things to come.

Cherries and the small fruits promises well. I had *May Bigarreaus* ripe on the first day of June.

Apples are of course more common here than any other fruit. Our varieties are nearly the same as with you. The Apple worm has seriously injured the crop for two or three years past. Many of our farmers are very negligent of their fruit trees. When they have planted them, they think their duty is done; the orchard is laid down to grass, and the trees struggle along the best way they can. Others carry their notions of duty further: they have learned from their fathers that Apple trees should be *trimmed* in the spring; and accordingly around with saw and pruning chisel they go at 'em. Their notions of pruning reminds one of the ideas of the Connecticut deacon, respecting family government. He read in his bible, "correct thy son betimes." He understood this to mean by times; i. e. at stated periods, or set times. Accordingly, he was accustomed to call his boys before him at regular intervals, and give them "the flax," however exemplary their conduct might have been; thus fulfilling, as he thought, a scriptural injunction. However, thanks to our favorable soil and climate, notwithstanding all the negligence of our cultivators, we believe we produce as good Apples as can be found in any part of the United States, the truth of which we will endeavor to convince you, if you will give us the pleasure of seeing you here about the time of our next County Fair, the first week in October.

I have thus poured out before you the contents of my little budget. If you find nothing worth saving, among the shrubs and fragments I have placed before you, they can be easily burned up; if I have communicated anything worth your notice, I shall be gratified. A. S. N.

(1.) We cannot see very serious difficulty in protecting a few garden trees from the grub, if no other remedy be resorted to than that of frequent examinations and removal of the grub. In the orchard this operation would incur a considerable amount of labor. We have known wood ashes to prove an effectual barrier, when placed around the base of the tree on the ground surface where the moth deposites its eggs. Air-slaked lime also answers a good purpose. Either should be applied in the spring, say in May, and be allowed to remain all summer. Both these applications make a good dressing for the tree, when spaded or forked into the soil in the autumn.

(2.) Quinces and Quince stocks suffered in the same way around Rochester in exposed localities. They have never been known to suffer in the slightest degree before, even in the coldest winter. The cause of injury last winter was first a thaw, which laid the ground bare, followed suddenly by a hard frost accompanied with high wind.

(3.) We never entertained the slightest suspicion of its being a foreigner.

(4.) Doctors will disagree. We do not consider the *Clinton* equal in quality to the *Isabella* or *Catawba*, but it is so hardy and productive, and so sure to ripen well when these others often fail, that we consider it valuable. People's taste differ very much in regard to flavor and sweetness or acidity of fruits. What one calls *delicious*, another may pronounce *intolerable;* one is all for sweets, and another all for acids. We know many persons who absolutely prefor good *Isabella* Grapes to *Black Hamburgs* or *Chasselas*. Some people can eat half a peck of sweet Apples at a sitting, while others would no more taste one than they would raw Turnips. It is fortunate, too, that there are such a variety of tastes.

A Letter from Wisconsin.—Believing that in order to cultivate fruit trees successfully, it is necessary to observe accurately the seasons and the effects produced on the different varieties. I shall (if you desire it), furnish you from time to time, with such facts as come under my own observation in this locality, and of which you can make such use as you see fit. [We will be much obliged for them.—Ed.]

In my last note to you in February, I referred to the blight of Pear trees, and sent you a shoot from an affected tree. A few days afterwards I discovered two others,—one a dwarf, the other a standard,—that exhibited the signs of disease. A person from a general observation of the trees would call them sound, but on close examination you would discover spots on the trunk of the tree or larger limbs, of a different shade from the balance of the tree, but not apparently dead; and on cutting into it you would find the inner bark presenting the same black appearance as in the shoot sent you. The other portions of the tree were perfectly sound, and the last year's wood and buds perfectly fresh. My own impression is, that there was sufficient vitality left to start the trees in the spring, and probably if left (I cut them off and grafted), they would have put forth leaves at the proper time, and continued to grow until the sap carried the disease through the trees, and thus die with the so-called "fire blight." I also observed this spring among my dwarf Apple trees one that did not start at the proper time; and on examination I found the bark, for three or four inches above the ground, entirely dead.

Roses, called hardy, such as *Blanche Vibert, La Reine, Marquis Boccella*, &c., were killed nearly to the ground, but presented a different appearance from the trees, being dried up, or burned by the heat of a clear sun in a frozen state, there being, as usual, no snow to protect any portion.

This spring has been a very unfavorable one for transplanting, having been very dry, with strong, cold, and drying winds prevailing most of the time; from the middle of February up to the last Saturday, there being less than five inches of rain. On the nights of the 28th and 29th of April we had severe frosts, with light frosts up to the 7th inst. At the time of the severe frosts, most fruit trees, except Apples, were in bloom, but Pear trees suffered the most. On one *Bartlett* and two *Duchesse d'Angouleme*, the leaf-buds as well as blossoms, were entirely killed The *Duchesse d'Angouleme*, thus far, proves the most tender of any of the twenty-five varieties I have tried. It stands our trying winters well, but is very easily affected by frosts when putting forth its leaves.

There is one other point on which I wish to say a few words, and make a suggestion, hoping that it may be beneficial; and that is, the delay of fruit trees on the route from the east to our western States. I can truly say on this point "our sufferings have become intolerable." A week ago I received a case of fruit trees, forwarded by rail-road from your city, that was only *twenty-four* days in reaching Milwaukie; and a friend informed me a day or two since, that he had an invoice of trees,—shipped by E. and B., of Rochester,—on the 21st of last month, and that he had then heard nothing from them. Cannot something be done to avoid this delay? I will propose that the nurserymen of your city, and other places if deemed best, unite and employ a person at Buffalo, to receive and forward fruit trees and plants from that point. Let this be his *only* business, during the season of shipping trees; and leave the forwarding from that point entirely to

him, to forward according to circumstances, and if sent by rail-road, let him take and forward to the dealer or purchaser a contract, providing against delay. (When on board of steamers bound for the proper ports, there is not much danger of delay.) A person ordering trees cannot tell what route will be the most expeditious; and the nurserymen cannot tell the best route to forward by from Buffalo, at the time the trees reach that point. I do not propose that this expense should be paid by the nurserymen, but let them add to their bills a charge for forwarding, which would be light upon each purchaser, properly apportioned. A. O. Babcock.

Some effective arrangement will no doubt be made by the nurseries here, before the fall business opens. One great source of delay is, that all rail roads and steam boats have more freight offered them during spring and fall, than their facilities enable them to transport promptly.

Minnesota as a Fruit-growing Country.—As this country is now attracting considerable attention, and its climate, soil, productions, &c., are becoming subjects of great interest to thousands, I have concluded that perhaps a short communication in regard to its adaptation to fruit culture might not be inappropriate for your columns. While all who are at all acquainted with our territory admit that its advantages are such as to make of it, ultimately, a great country, there are many who doubt whether fruit can be successfully grown here to any considerable extent. The grounds on which these opinions are based, are the high latitude, (43° to 49°), and the extreme cold of a few days in winter, (sometimes 30° below zero).

In opposition to these theoretical conclusions I wish to state some facts based upon my limited experience here. In the spring of 1853 we brought up and planted here about 20,000 trees of all kinds, most of which were root-grafted Apples. But besides these were Apple, Pear, Cherry, Plum and Peach trees, of a size suitable for orchard planting, together with a considerable stock of ornamental shrubbery, Roses, &c. These trees all made a fine growth during the summer; indeed, many of them made a greater growth than was desirable, as it was apprehended that they would not be in so good a condition to stand the winter as if the growth was less.

The last winter was one of unusual severity; although, as a whole, it was very pleasant, yet there were several days of very severe cold. At two different times the mercury was as low as 35° below zero. It will at once be seen that this was rather a severe ordeal for the unacclimated trees; and I presume it will not be uninteresting to Horticulturists to be informed somewhat in detail of the result.

The Apple and standard Pear trees, of a size suitable for planting, are entirely uninjured, and a few of them have blossomed this spring.

The dwarf Pear trees are generally uninjured. There are a few, however, that made a second growth late in the fall, that are somewhat scorched at the extremities of the branches.

The more tender Heart and Bigarreau Cherries are pretty severely injured, though not killed, while the Dukes and Morellos are in a fine condition.

Plums are uninjured.

Peach trees are pretty badly scorched, but are making a very fine growth this spring; and it is remarkable that worked trees are in fully as good condition as seedlings.

The root grafts include about seventy varieties of Apples. There is a striking difference in the hardiness of these varieties, as shown by their appearance this spring. While some are entirely uninjured, others are slightly, and still others quite severely affected by the winter. After a careful examination I give the following as varieties entirely hardy:—*Peck's Pleasant, Autumn Strawberry, Porter, Red Astracan, Fameuse, St. Lawrence, Early Joe, Summer Pearmain, Tolman Sweeting, Lady, Wagener, Pomme Gris, Red Ingestrie*, and one or two others.

Among those slightly affected are—*Gravenstein, Swaar, Esopus Spitzenburgh, English Russet, Rawle's Janet* or *Never Fail, White Winter Pearmain, Yellow Bellflower, White Bellflower, Sweet June, Dominie, Northern Spy, Early Harvest, Golden Sweet, Red Detroit*, and a number of others.

Among those most severely injured are—*Vandervere, Maiden's Blush, Ladies' Sweeting, Summer Rose, Summer Queen, Newtown Pippin, Rambo*, and several others.

Isabella Grapes are somewhat injured, some of them being killed down to the surface of the ground. The *Clinton* is perfectly hardy.

All the small fruits, Currants, Gooseberries, Raspberries, (not including the *Antwerps*), &c., perfectly hardy.

The Hybrid Perpetual and Bourbon Roses but little injured, although no protection was given them.

I think it safe to conclude, from the above, that Apples, Pears, Plums, Duke and Morello Cherries, and small fruits generally, may be as successfully cultivated here, as in New York or New England. In the selection of varieties of Apples, however, it will be well to select, mostly, from those embraced under the first head.

Heart and Bigarreau Cherries, Peaches, and *Isabella* Grapes, will require some protection. Planting them in a situation where they may be sheltered from the rays of the sun, in our bright winter days, will probably be sufficient.

In conclusion, permit me to add a few words in regard to our spring weather Persons who have never visited this region, conclude that our winters must necessarily be very long, and that spring can scarcely be said to commence before May. A more erroneous opinion could not be entertained. From the experience of two years, I assert that our springs are earlier, more pleasant, and more favorable for fruit, than those of either Western New York, Michigan, Northern Indiana, or Illinois. I have no doubt this assertion will startle some who have been accustomed to look upon the matter in a very different light. But let me state some facts, and leave the candid to judge, from them, whether I am not justified in making it.

Snow had entirely disappeared, this spring, by the middle of March, and by the 20th of the month the frost was entirely out of the ground. On the 9th of April we had a slight fall of snow, which melted almost as fast as it fell; since then we have not seen a flake of snow. From the 1st to the 25th of April we had occasional white frosts, but none of sufficient severity to freeze the ground. Since the 25th of April we have had no frost at all; and since the 1st of May the thermometer has at no time shown a lower temperature than 39°. Since the middle of April our prairies and openings have been covered with good pasture, and cattle have required no feeding. Vegetation of all kinds is in a state of forwardness, corresponding with the temperature. As one instance of this, I will mention that I saw ripe Strawberries on the 30th of May, gathered where they were growing wild.

It may be thought that this has been a remarkable season, and an exception to the general rule. In regard to that, I will say that it has been very similar to that of 1853; and that the "oldest inhabitants" here represent them as nothing extraordinary, but only a fair specimen of the springs in this locality.

But I presume I have spun out this communication to a sufficient length, already, and will therefore bring it to a conclusion. I may, at some convenient time, send you a description of the wild fruits, and other trees indigenous to this section of country. G. C. Merrifield.

Mr. Merrifield has our thanks for the valuable information he has communicated. We solicit similar statements from other parts of the country.—Ed.

Mr. Mathew's Curculio Remedy.—Finding a notice of the committee appointed to test this remedy, in the June number of the *Horticulturist*, with the two following observations—That *I* objected to the large committee appointed by the N. Y. State Society, and that it will take several years to test the remedy,—through fear of its creating a prejudice or wrong impression on the minds of the community, I have thought best to explain the first, and give my opinion on the latter. As I was authorized by Mr. Mathews to have committees appointed by such societies as

I thought best, I selected the Massachusetts Horticultural Society, N. Y. State Society, and the United States Agricultural Society, which met at Washington city. The committees to be appointed were to consist of three persons each; I was thus instructed by Mr. MATHEWS; I could not transgress my authority. The other societies, I believe, appointed three each; at least, I received a letter from Hon. MARSHALL P. WILDER, stating that he was chairman of a committee of three, appointed by the United States Agricultural Society, I think. The secretary of the N. Y. State Society informed me that they had named six persons, giving me their names and residences. I adopted the three first names; and in so doing I venture to say, if one dozen had been appointed and accepted, the test or proof would not have been more conclusive than with the three. They are not only *practical pomologists, but high-minded, honorable men;* consequently their report, whether favorable or not, will have the confidence of the people. This committee is located at Albany, Newburgh, and Macedon. *I* am experimenting at Syracuse, with others, besides experiments are being made at Columbus and Cincinnati, Ohio, as I am informed. If all of these committees and experimenters, scattered over the country from Washington city to Cincinnati, Ohio, are not sufficient, I think one hundred would not be more so. Mr. MATHEWS thought, also, that the liability to its becoming known would be much greater by confiding the remedy to *so many persons*, than if it was made known to just a sufficient number. I had an objection, also, on account of the labor it would require of me. I had been (and was, up to April,) sick the greater part of the winter; and as Mr. MATHEWS had written out at length his observations on the habits of the curculio, &c., and had requested me to make the same known to every member of each committee, it would impose upon me the necessity of writing a number of copies, which were very lengthy. These are the reasons why a committee of not more than three was accepted.

The next point I wished to notice, was the time you think it will take to test the remedy—viz: several years. I feel fully persuaded, and I think every committee appointed will be of the same opinion, that if it is successful now, *this season*, it will be always, *every season;* because the remedy is philosophical—founded upon nature's laws. It cannot be otherwise, if it answers at all. It is utter destruction to the pests we have to contend with. Every man possesses what is necessary for the operation. The cost is in a manner nothing. I would ask, if you had four or six Plum trees in a row, the branches of each not meeting by four to six feet, and you apply the remedy to the second tree about the time you see they have just commenced making the crescent-shaped incision. You then wait a few days longer, and take the fourth tree; when you arrive there you find that at least one-half are stung. You apply the remedy to this tree, and for the satisfaction of investigators, you let them see you pluck every Plum from five or six branches that are incised, and leave none on but what are sound. Now for the result,—If the fruit on the first, third, fifth, and sixth trees, are all stung, and fall off, and the second tree is overloaded with fruit, and a sufficient crop on the fourth, and not a Plum can be found punctured on the five or six limbs, from which the punctured fruit had been previously picked, I ask, is this not conclusive? The remedy has saved the Plums where it was applied, and all the contiguous trees to which it was not applied, cast their fruit. The above are the facts in Syracuse. We have a Nectarine tree which has never borne a *single fruit.* We waited until fully one-half were punctured by the turk, and then the application was made; the punctured fruit on some limbs were pulled off, on others the incision was cut out of each Nectarine. The result was as above stated; and I can now show you as handsome fruit on this tree as ever grew, and this is the first time for years. So are Plum trees loaded with fruit, where the remedy has been applied. I am satisfied, in my mind, that if the remedy is applied strictly as ordered, that *no tree will fail of having a full crop of fruit* any year. Recollect, the application has to be made only once *each* year. A. FAHNESTOCK, *Syracuse.*

We certainly had not the slightest intention to create prejudice, or convey any false impression concerning Mr. MATHEW's remedy. We entertain strong hopes that it will prove effectual, and have entire confidence in Mr. M.'s integrity in the matter, whether it

do or not. It was announced in the journal of the N. Y. State Agricultural Society, that a committee of six persons were appointed to test the remedy, and we saw it stated afterwards that Mr. FAHNESTOCK objected to such committee, and had selected three of them only. We gave this merely as an item of intelligence. We said that it might require several years to make a reliable statement; but if the committee can be satisfied to report at the close of this curculio season, we shall be happy to announce the fact. The circumstances related by Mr. FAHNESTOCK are so far quite satisfactory.

INSECTS.—I send you, accompanying this, specimens of a worm which threatens to be to the Apple, Pear, and Cherry, what the curculio is to the Plum and Apricot, only that besides destroying the fruit, they seriously retard the growth of the tree, which renders them doubly destructive.* They usually commence operations in the bud, and are then so minute as scarcely to be detected by the naked eye: a brown worm a line or so in length. When one bud is destroyed, they migrate to another; and as the tree progresses in growth, eat in at the base of the young shoots, and also at the base of the fruit stalks, thus destroying the fruit, and injuring the growth of the tree. They belong to the leaf-roller genus, forming for themselves a secure retreat by rolling together the edges of a small leaf, or else hiding among the bracts at the base of the fruit clusters, and are nocturnal in their habits. I have never been able to trace the progress of their metamorphosis, and know nothing of them except in the larvæ state.

Last season they were very destructive to the fruit crop in this section, particularly Apples and the finer sorts of Cherries. The numerous bracts at the base of the fruit clusters of the latter afford them a peculiarly safe and convenient retreat. They seem to be even more abundant this season than they were last.

I am inclined to think that the depredations spoken of by your correspondent, A. G. HANFORD, of Waukesha, Wis., in the August number of the *Horticulturist*, for last year, were committed by this worm instead of the weevil, to which he attributes it. A little careful observation would soon settle the question.

It is important that every fruit culturist should be on the alert to discover, and devise means to destroy the constantly increasing list of enemies to the fruit crop; for, with the utmost care, success may be regarded as uncertain, except in some favored localities.

I am happy to acknowledge the receipt of those *English Russets* which you had the kindness to send me. I think they closely resemble the seedling russet which I sent you. The latter was very likely produced from seeds of the former, but are a little less acid, more flattened, not as large or productive, and not as good keepers as the seedling. This, at least, is my experience. I may be deceived; and it may be the identical *English Russet*. R. B. WARREN.—*Alabama, N. Y.*

ENCLOSED I send a small section of an Apple limb, enclosing two "limb borers." I have not seen any description of them in eastern fruit books. Perhaps they may be of interest to you. The pair are in the situation in which they were on the tree, and are supposed to be male and female. The branch is cut at the lower end of their hole; you will see that they entered at the base of a fruit spur. They sometimes enter branches one-half or three-fourths of an inch in diameter, which generally withers or is broken off by the wind at the point of their operations. I have never before discovered but one in a burrow. J. C. BRAYTON.—*Aztalan, Wisconsin.*

The borers referred to had cut through the papers enclosing them and disappeared, leaving only the perforated branch and a quantity of saw-dust. The branch was bored completely hollow, throughout.

* We have observed these insects—leaf rollers—for many years, and usually send a person round to pick them off and destroy them. They do not appear to increase with us, nor to work any serious mischief.—ED.

Winter Protection of Grape Vines.—What degree of cold Grape vines can endure without injury, is an interesting question to cultivators in an inclement climate. Where I am located, we may expect the thermometer to sink to 20° below zero, Farenheit, every winter, though there may be exceptions. On the 16th December, 1835, I saw it at —37° (the night of the great fire in New York), at 2 o'clock A. M.

My house is span roofed, glass all around to within eight inches of the ground. This past winter, thinking to provide against any extremity of cold, had the vines covered with tan-bark and saw-dust. The result has proved that it was a most injudicious method. The buds on the length of cane of last season's growth were injured very materially, so much so that several of the vines we have cut down to the first healthy shoot below the dead buds.* The wood was well ripened. The injury was *probably* owing to the moisture in the covering freezing, and in mild weather keeping the buds too moist.

The name of the unproductive vine I wrote you of was *Prince Albert*, pruned on the spur system, and has been well managed.

Uncovered vines the 28th March,† and this day we commence thinning the berries in the bunches. M.—*Oneida Co., N. Y.*

American Pomological Society.—Samuel Walker, Esq., of Roxbury, Mass., general Chairman of the Fruit Committee appointed by the American Pomological Society, has issued to the Chairman of each State Committee the following circular, calling attention to the more important points which they are expected to investigate. It is very evident that if the questions presented in this circular be answered by accurate reports from various States and sections of the country, we shall be put in possession of a vast fund of information.

Dear Sir:—The Constitution of this Society provides that there shall be in each State a Standing Fruit Committee, of five members; and of the Committee for the State of the gentleman whom I have the honor to address was appointed Chairman, with power to fill any and all vacancies in his Committee.

At the meeting of the Society to be held some time during the present year, an important and delicate duty is to be discharged, namely—to present to the country a full list of the fruits that are worthy of cultivation, and, as well, of those that cannot be so recommended. In the preparation of these lists, the Society will naturally, and very properly, look to the various State Committees for well-digested information, to aid them in their labors, and to guide them in their decisions.

This single view of the case, (and there are others that could be presented,) will alone show how important it is, that the State Fruit Committees should be organized and at work, in good season; and that they should labor in concert, as the only means of obtaining systematic and satisfactory results.

If the Committee for your State is not already appointed, I trust that you will at once (as you are fully authorized by the Society to do,) select and appoint four competent persons to be your associates; and that you will call together this Committee *at the season of maturity* of such fruits as abound or excel in your State, to examine specimens and elicit information concerning them; and that you will furnish me with a Report for your State, previous to the Society's next meeting.

To render the various returns more systematic and thorough, it has appeared to me best to adopt for our guidance, the present year, the recommendations and forms contained in the circular letter of my predecessor, the lamented Downing, which are in substance as follows:—

The State Committee will endeavor to ascertain these points, viz:—

First.—Upon what kinds of natural soils, superior kinds of any of the standard fruits are grown.

* We prefer clean dry straw to wrap the vines in; and if this be an insufficient protection, we lay matts over them.

† Quite too early for a cold vinery in your latitude; we never uncover ours until after all danger of hard frosts is over.—Ed.

in your State; particularly whether lime or potash abounds in the soil, or subsoil; whose decomposition furnishes these, or other mineral substances, essential to the perfection of the fruit.

1. If the result has been obtained by the use of manures, or any peculiar system of cultivation, what kinds of manures or composts have been applied;—how, and when; and upon what kind of natural soil. Also, what mode of culture has been pursued.

2. In districts remarkable for the excellence of a given variety of good fruit, ascertain if such is the case upon *various soils* in such district, or only upon particular soils; and in the latter case, the character of such soil. Also, how large are the annual crops; and how long the variety has been in cultivation.

Second.—What are the most profitable market fruits of good quality in your State. Also, the best fruits for the table; and whether any particular sorts require extra pruning, manuring, or other peculiar mode of culture.

1. Which varieties succeed *only*, and which thrive best, upon particular stock, (as the *Louise Bonne de Jersey* Pear on Quince, &c.)

2. What varieties have been tried and condemned as inferior, or worthless, by experienced fruit growers in your State.

3. What are the synonymous, or local names, by which any standard varieties are known in your State.

4. Whether the trees of any particular varieties are particularly liable to blight, or other and what diseases.

5. What Grapes are the best for vineyard culture; (if vineyards are planted in your State.)

6. What Raspberries, Strawberries, Currants, Apricots, Nectarines, and other minor fruits of good quality, are found best adapted to culture in your State.

To arrive at uniformity in judging of the flavor of fruits, it will be well to use the comparative degrees of merit adopted at the Convention, viz:—Good, Very Good, Best. And that we may agree regarding these terms, certain standard sorts should be taken as representatives of these classes, wherewith to compare other fruits, and ascertain their value.

The following form, and the varieties therein named, will serve as examples for this purpose:

	Good.	*Very Good.*	*Best.*
Apples,	Maiden's Blush.	Gravenstein.	Esopus Spitzenburg.
Pears,	Napoleon.	Bartlett.	Seckel.
Plums,	Lombard.	Washington.	Green Gage.
Cherries,	Black Heart.	Elton.	Black Eagle.
Peaches,	Crawford's Late.	Old Mixon Free.	George IV.

Fruits falling below the rank "*good*," (excepting culinary sorts,) are unworthy of cultivation, unless their hardihood and productiveness are so remarkable, as to make them valuable in particular localities, or for market cultivation.

Though the attention of this Committee is understood to be chiefly directed to acquiring information regarding varieties of fruit already known, yet some attention should be paid to the examination of remarkable *new* varieties. Unless the latter, however, rank as high as "good," they ought not to receive attention; and a new sort, even if excellent, if it is also meagre, unhealthy, or unproductive, is unworthy of notice.

When a variety of "very good," or "best" quality is presented to the examination of a State Committee, and there are doubts whether it is really a new variety, specimens should be sent to the Chairman of the Fruit Committee at Boston, Philadelphia, or the Chairman of this Committee, so that it may be subjected to more complete examination. Outlines, also, and careful descriptions of new varieties of high merit in all respects should be made for the use of the Society. In drawing up such *descriptions*, the "Pomological Rules" adopted by the various Horticultural Societies should be followed as a guide, in order to avoid diffuseness and variety of terms on the one hand, or imperfection in details on the other.

SAMUEL WALKER, *Chairman General Fruit Committee.*

Answers to Correspondents.

(W. B., Salem, Wis.) ASPARAGUS.—We will comply with your request soon; at any rate before planting season.

AMERICAN HOLLIES.—A Correspondent inquires where plants of the American Holly can be had. Will any nurseryman who has them for sale make it known?

(Mrs. T., Columbia, Tenn.) CAMELLIAS.—We cannot do better than refer you to a short article, on pages 131 and 132 of our last volume. It gives some excellent and reliable hints on soil, potting, shifting, temperature, pruning, watering, &c.

(J. S. J., Greencastle, Ia). THE MCVEAN PEAR.—This is a seedling of Monroe Co., N. Y. A large, handsome fruit, of good quality, though rather variable. Tree very vigorous, and an abundant bearer. It is not much disseminated, and may not prove worthy of extensive culture.

("A Toronto Amateur.") PIRACY.—We can pay no attention to your statement, until you give us your name, or the name of the book referred to. We make it a rule to require the name of all correspondents, when we have to rely upon their good faith for the accuracy of their information.

(T. E., BARNESVILLE, O.) We would recommend you *Allen's Treatise on the Grape*—price, we think, $1,25; *Chorlton's Treatise*, 50 cents; and *Leuchar's on Hothouses*, &c., about $1,25. You may get them in Cleveland or Cincinnati. DERBY, the publisher in the latter place, keeps a good assortment of such works.

(D. L., Normandale, C. W.) INSECTS.—We think your trees must have been injured by the small caterpillar you describe; but you should have stated the nature of the injuries, whether it was the destruction of the foliage, or perforation of the wood, or what else.

BONES.—We would prefer breaking them up into small pieces, or grinding into powder in a raw state, to burning. Fire destroys the organic parts, which are the most immediate fertilizers.

PROPAGATION OF ORNAMENTAL TREES.—Be kind enough to designate such as you want information about, and we will endeavor to comply with your request.

TAN ON STRAWBERRIES.—In answer to your correspondent "T," in the June number of the *Horticulturist*, respecting tan-mulching for Strawberries, I think his error consisted in applying too much tan-bark immediately over and around the plant. For ten years I have used tan-mulching for Strawberries, but I never permit more than a quarter or half an inch deep immediately around any plant, and none whatever so as to clog or smother the plant. The rest of the bed I cover from one to two inches deep, and apply it when I set out the plants or dress the bed either fall or spring. I have never lost a single plant from mulching with tan, but think they have been greatly benefited. The only thing I dare cover the plant with, even to the depth of one inch—which is abundant for our coldest winters—is clear loose straw; and that I remove from off the top of the plants on the earliest opening of spring, so as to give the plants an abundance of good air constantly. The sulphate potash and ammonia solution should be applied freely and directly on the plants and leaves, if not stronger than ¼ lb. sulphate potash, ¼ lb. suph. soda, (glauber salts,) and 1½ ounce ammonia, to 6 gals. water. The tan is excellent to spade in after using for years as a mulch. If any doubt this, let them place a few chips of old tan-bark under a new plant, and in a few months the fibrous roots will fasten in great numbers on every part, like tree roots to a bone. AMATEUR.

WILL some correspondent of the *Horticulturist* furnish its readers with an article on the culture of the Sweet Potato, and the best mode of preserving seed during winter. JNO. D. LEE.—*Athens, Ill.*

See June number.

PLAN FOR FRUIT HOUSE.—I wish to inquire of you for a plan of a fruit-house, in connection with an ice-house. It is generally understood that tender and perishable fruit can be kept perfectly sound and good, almost any length of time, provided they can be kept in a cool place, but little below the freezing point. Such a fruit-house as would preserve Raspberries, Strawberries, Blackberries, Peaches, early Pears, Apples, Apricots, Nectarines, Cherries, &c., the year round, would be a valuable auxiliary to our kitchen. Now, can you, or any of your readers, give me the plan of such a house, through the columns of the *Horticulturist*? JOHN GAGE.—*Waukegan, Lake Co., Ill.*

We cannot give such a plan. Berries and stone fruits may be cooled in an ice-house, or they may be preserved a day or two in it; but they will soon lose their freshness and flavor.

EFFECTS OF LAST WINTER ON OSAGE ORANGE HEDGES.—I am anxious to have from some of your correspondents who have been engaged in the cultivation of Osage Orange for hedges, what has been the effect on them from the weather of the past winter. I have one, about 100 yards long, transplanted three years ago the present spring. The two first winters I protected it slightly with Sedge Grass; but it having attained the size of a man's thumb at the base, I considered it safe from the cold, and risked it last winter without protection. All the growth of the last year was killed, and many, say about one quarter of the plants, killed down to the ground. They are sprouting from the roots, however, but the beauty of the hedge is gone. It had not the average exposure of shrubbery in the New England States, and had been well treated and tilled. J. W. FOWLER.—*Milford, Conn.*

Hedges of various ages on our own grounds have passed this last winter and previous winters, when the cold was more intense, without the least injury. Even yearling plants in the nursery were uninjured, save on the points. In a neighbor's hedge, however, some five or six years old, we have noticed an occasional plant killed to the ground. The plants are over an inch in diameter. The plants in this hedge were set thinly in a double row. We think that when they are set close, say six inchs apart, they shelter each other, and are less liable to injury. The most destructive element here, during last winter, was high winds of several days continuance, when the ground was unprotected by snow, and the weather freezing, but not intensely cold. The roots of the Quince were injured in exposed places, just at the surface of the ground, and a little below. This has never occurred before, during our residence in the Genesee Valley—a period of fourteen years; and it may never occur again.

Notices of Books, Pamphlets, &c.

FARM IMPLEMENTS, AND THE PRINCIPLES OF THEIR CONSTRUCTION AND USE; an elementary and familiar treatise on Mechanics, and on natural philosophy generally, as applied to the ordinary practices of Agriculture. With 200 engraved Illustrations. By JOHN J. THOMAS. New York: HARPER & BROTHERS, Publishers.

Mr. THOMAS has done the agricultural community a great service in the preparation of this book. It was much needed. Improvements in the construction of farm implements and machinery have contributed largely to the progress which has been recently made in the art of cultivation. Compare for a moment our modern plows, cultivators, or horse-hoes, reapers, mowing machines, straw and hay cutters, root cutters, &c., with the farmer's implements of over five and twenty years ago, and what a difference we see. Science has been silently and steadily at work in effecting the vast improvements, placing new powers in the hands of the husbandman, by which he is not only enabled to cultivate three or four times the amount of land with the same amount of labor, but to do it infinitely better. Besides, this application of science to the improvement of implements and machines has elevated the art of husbandry from the condition of a rude, unintellectual routine of drudgery, to that of a pursuit which is daily attracting to it men of wealth, education, and refinement.

Every farmer, and every farmer's son, must be aware of all this; a glance among the stock of implements cannot fail to suggest to them the service which science and invention have conferred upon them. But it is not enough to know this. The principles upon which this great improvement are based should be studied. No man should be satisfied with merely the *possession* of the best plow, or reaper, or thrashing machine; but should study

its construction, the various forces which combine in giving it completeness and efficacy, and the natural principles or laws from which these forces spring. It is this sort of study only which will make implements and machinery intelligible, and enable the operator to adjust their parts, and use them to the greatest possible advantage.

Comparatively perfect as are our modern implements, no one will say that they cannot be still further improved. Our belief is that the next ten years will do more for them than has the past twenty. Mechanics have not received proper aid and coöperation from the practical cultivator, simply because the cultivator has thought it not his province to invent, but to use the inventions of others. When the farmer will study the principles of construction, he will soon be able to suggest improvements to the mechanic; and then we may expect improvements in earnest.

Mr. THOMAS' work will give an impulse to this matter, which cannot fail to result in great benefits to the agricultural interests of this country. We wish, therefore, to see it placed immediately in the hands of every farmer and farmer's son, as an indispensable book, and school commissioners should see that it has a place on the shelves of every rural district school library. It is admirably adapted for popular use as a text book. The different subjects are judiciously divided into chapters, and sub-divided into sections; the illustrations are ample and excellent; the style is plain and concise, unencumbered by needless technicalities; and there is everywhere that carefulness and precision that characterizes all the writings of Mr. THOMAS. Every statement is made in such a straightforward manner that even a child could not mistake or fail to discover the point and meaning. This we consider an excellency worthy of being pointed out in a book of this kind.

In addition to thus expressing our opinion of the book, we would gladly, if space permitted, give an epitomized statement of its contents, but we must refer to the book itself.

Horticultural Societies.

BROOKLYN HORTICULTURAL SOCIETY.—This society held a "Festival of Roses" on the 15th and 16th of June, in the spacious and elegant public hall known as the "Athenæum." We had the pleasure of making a hasty visit on the first day, but it was immediately after the hour of opening, and before the committees had finished making their awards, or had placed the names of contributors on the objects exhibited; we are therefore unable to speak of the show in other than general terms, except in a few cases. The articles were placed on tables distributed irregularly around the room, as so many flower beds on a lawn. The cut Roses were inserted in wet sand, covered with a wire net-work, and the pot plants were tastefully grouped on tables, covered with green glazed cloth. Thus the arrangement was not only effective, but enabled visitors to make a satisfactory examination of every object.

There were but five or six collections of Roses, and some of the best were not named; a very great defect. The best named collection, we believe, was that of J. W. DEGRAW, Esq., President of the society. Messrs. JAS. WIER; GABRIEL MARC, of Astoria; and WM. BURGESS, of Williamsburg, presented good collections. Mr. BURGESS had some standard Roses, taken that morning from the open ground; one was worked with a slender-growing variety called a "new Weeper," the flower of which did not appear to possess much merit; and above this, on the same plant, *Geant des Batailles*. He had also several seedling Roses, some of which promised well. He had fine blooms of *Paul Ricant* and *Caroline de Sansal*, some fifteen varieties in all.

An ornamental design contributed by Mr. HAMLYN, gardener to J. C. LANGLEY, Esq., of Bainbridge, L. I., occupied a table in the center of the room. It was a rustic stand in form of a tree, the branches of which were laden with boquets and clusters of ripe Grapes; a very attractive center piece. The boquets and fruits were exhibited on this table.

Mr. J. E. Ranch contributed a large collection of pot plants, including many of the newest and best Fuchsias, Fancy Pelargoniums, &c. There were several tables of pot plants, many of them Fuchsias, well grown magnificent plants. On one table we noticed a large fine plant in bloom, of *Erythrina*; a fine *Ardisia*, loaded with fruit; a large *Adamia versicolor*, in bloom; besides *Euphorbias, Mahernias*, &c. On another table, good plants of *Allamanda schotti, Ixora coccinea*, and *Gloxinia agrostygma*. Another table, we think Mr. Snooks', had a nice collection of new Gloxinias; and another a small collection of Verbenas, in pots, but they were not in exhibition trim.

The show of fruits and vegetables was very meagre for the season. Mr. Collopy, gardener to J. H. Prentice, Esq., offered three excellent heads of Cauliflower, and three heads of tolerable Lettuce. On the same table were some new Potatoes, from Mr. Geo. Ingram; and very large Cucumbers from the garden of R. L. Colt, Esq., of Patterson, N. J. We observed but one kind of Strawberry, offered in two or three dishes, by Mr. Collopy; they were not named, but appeared to be *Hovey's Seedling*. We noticed but one dish of Cherries, and they were not ripe. We believe the Cherry crop is poor around the coast this season. Grapes, from the garden of N. Stetson, Esq., Bridgeport, fine bunches of *Black Hamburg, Muscat of Alexandria, Cannon Hall Muscat*, and *White Frontignan*. From Mr. Hamlyn, gardener to J. C. Langley, *Black Hamburg, Zinfindal*, and five other varieties. Mr. Langley's vineries, at Bayridge, L. I., are very extensive, and we have no doubt are well managed.

We would suggest that the officers and committees of the society endeavor to persuade exhibitors to label their plants legibly before placing them on the table; even what are called "common" plants, should be named. There is always a delinquency on this point, in new societies, and it cannot be remedied at once. The Brooklyn society appears to be in excellent hands, and we are happy to learn that so far the citizens have given it a generous support.

Astoria and Ravenswood Horticultural Society.—This newly started Society held its first meeting on the 8th and 9th inst., and was very creditable to the promoters and practical talent of the neighborhood. We say the neighborhood, because the fine productions that were there exhibited were all from the immediate locality. Astoria and Ravenswood are two approximating and thriving villages, fast rising in importance, and around whose precincts are rapidly clustering those pretty rural dwellings with their accompanying neatly laid out and well kept gardens—an escape, it may be said, from the filthy, disease-engendering streets, and the closely pent in city of bricks and mortar, but heavily taxed New York. As respects the advancement of Horticulture, and the encouragement held out to the amateur fond of his garden, the above neighborhood holds out every inducement. Its proximity to business, (only half an hour's ride by steamboat or stage from the city), situated along the banks of the romantic East River, and having in its midst several of the best horticultural establishments in the State, which are conducted by men whose abilities are amply verified in their practice, liberal minded, devoted to their profession, and always ready to give advice to the novice. There are also several floral and nursery gardens, conducted by men who know well how to supply the wants of the people, and what will flourish in the locality, which is salubrious and sheltered, and we have nothing wanting. There appears at present to be a determination to have an earthly paradise here—may this present move be successful. There is nothing to prevent it but the lukewarmness or backwardness of the public generally, which I am sorry to say was somewhat shown on the present occasion. Notwithstanding the exertions of the best practice, funds are wanted to support such institutions, and if not forthcoming, the thing cannot proceed. Several gentlemen have liberally come forward with their assistance, and we hope that the zeal of those who have so generously commenced in this good undertaking, may not be swamped by the want of means to render such a society permanent, and continue its usefulness.

This, and the neighboring Brooklyn society, are a secession from the New York one; they combine the "bone and sinew" of that institution, and have separated from it for reasons best known among themselves. If they could be induced to amalgamate into one body, we might yet have for the Empire City a Horticultural Society, worthy of the name and the place.

Taken collectively, the show was very good, and the various exhibitors deserve the greatest praise. Among the best productions were *Tetratheca verticillate*, from Mr. Woolsey's gardener, Thomas Duncan, three feet across, and loaded with its beautiful blue flowers to the pot edge. *Hoya bella* and *Cyrtocerus reflexa*, from the same. *Clerodendrum Kæmpferi* and *squamatum*, from Mr. Hoyt's gardener, Alexander Gordon; four feet high and as much across, well bloomed. *Torenia Asiatica*, from Mr. Blackwell's gardener, Robert Morrison; a perfect gem. Fine *Black Hamburgh* Grapes from Alexander Gordon. Fourteen species of *Mammillaria* and *Melocactæa*, including a fine specimen of *senilis*, from Mr. Vandeventer's gardener, Wm. Grant, to which a special prize was recommended. *Cattleya Forbesii*, *Dendrobium densiflorum*, *Oncidium flexuosum*, *Epidendrum purpurea* (var.) and *Cupressus funebris*, from Mr. Hogg; not for competition. There were also several seedling *Verbenas* of good form and extra quality, from Mr. Isaac Buchanan among which was one nearly black, named *Uncle Tom;* not for competition. *Duchrydium cupressinum*, twelve feet high, from Messrs. Thorburn; and *Cryptomeria Japonica*, eight feet high, from Mr. Marc.

Toledo (O.) Horticultural Society.—The first weekly meeting, for the season, of the Toledo Horticultural Society, was held on the 14th of June, and was well attended. The show of fruits was small, as was to have been expected so early in the season.

Cherries Exhibited.—By C. E. Perigo, Cleveland Bigarreau. By Federick Bissell, Mayduke, and Black Tartarian By T. M. Cooley, Mayduke, Knight's Early Black, and Elton. By M. Johnson, Black Tartarian. By Mrs. E. Blis Mayduke. By D. Wadsworth, Black Tartarian. The Maydukes were almost, without exception, very fine, as were also the Cleveland Bigarreau.

Strawberries.—By M. Johnson, Hovey's Seedling. By H. Rentnik, Hovey's Seedling, and Large Early Scarlet By C. E. Perigo, Large Early Scarlet.

Gooseberries.—By C. E. Perigo, Amber, very large and fine. An unknown variety, by C. E. Woodruff.

In vegetables, the show was quite respectable. In flowers, it quite surpassed expectation.

Maddocks, Perigo and Prentice, exhibited forty-three varieties of Hybid Perpetual, Moss, and Bourbon Roses, specimens of Rhododendron, Ficus elasticus, Cryptomeria, Arbor Vitæ, Warriana, and several other varieties of Evergreens, and several varieties of Pæonias in bloom. Hanson & Co. exhibited four varieties Calceolaria, Cactus Ottouis, and Cactus Cucacanthus, all in bloom. Boquets, without lists of the flowers, were presented by Mrs. E. Bliss, Mrs. M. Johnson, Mrs. J. W. Scott, Mrs. T. Dunlap, Mrs. C. E. Perigo, Mrs. H. Bennet, Miss M. Young, and Hanson & Co.

Mr. William Machen, a young artist of Toledo, presented for inspection his collection of paintings of "indigenous birds of the neighborhood," embracing upwards of a hundred varieties, collected and painted from life by himself, and some of them for the first time now brought to public notice. The collection elicited universal admiration, as well from the industry and enterprise exhibited by Mr. Machen in obtaining it, as from the truthfulness with which nature had in all instances been copied.

The meetings of the society are to be held weekly through the season.

Albany and Rensselaer Horticultural Society.—We have received a pamphlet containing lists of officers, committees, and regulations for 1854. Summer exhibition, June 15th; Annual exhibition, September 6th and 7th; Winter exhibition, February 21st, 1855.

Officers for 1854.—HERMAN WENDELL, M. D., Albany, *President.* C. P. Williams, Albany; Amos Briggs, Schaghticoke, Rensselaer Co., *Vice-Presidents.* Joseph Warren, Albany, *Secretary.* Luther Tucker, Albany, *Treasurer.* V. B. Douw, B. B. Kirtland, J. M. Lovett, L. Menand, E. Corning, Jr., James Wilson, John S. Gould, A. F. Chatfield, *Managers.*

ROSTIEZER PEAR.